JPRS 78172

28 May 1981

USSR Report

ECONOMIC AFFAIRS

No. 963

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

JPRS 78172

28 May 1981

USSR REPORT

ECONOMIC AFFAIRS

No. 963

CONTENTS

ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

Social Differences, Other Problems Complicate Regional Economic Development
(K. Vavilov; POLITICHESKOYE SAMOOBRAZOVANIYE, No 2, 1981)....... 1

Lack of Departmental Coordination Impedes Progress
(PRAVDA, 12 Feb 81; SOTSIALISTICHESKAYA INDUSTRIYA, 24 Mar 81).. 10

Priority Research Problems Suggested, by G. Karkhin
Object Program Methods Proposed, by B. Mil'ner

PLANNING AND PLAN IMPLEMENTATION

Bachurin, Minister Discuss Plan Control Figures
(EKONOMICHESKAYA GAZETA, Mar 81)................................ 15

Development of Control Figures
Assignment of Control Figures

INVESTMENT, PRICES, BUDGET AND FINANCE

Economists Review Price-Setting Methodology
(M. Zagumennov, H. Sokolova; EKONOMIKA SOVETSKOY UKRAINY, Feb 81).. 21

REGIONAL DEVELOPMENT

Pavlodar-Ekibastuz Complex (TPK) Examined in Depth
(NARODNOYE KHOZYAYSTVO KAZAKHSTANA, Feb 81)...................... 30

Flaws, Achievements of Ural Area Development Reviewed
(A. Demenev, V. Shipilov; URAL, Jan 81)......................... 62

Potential of Eastern Regions Studied
(M. Mazanova; EKONOMICHESKAYA GAZETA, Feb 81) 72

ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

SOCIAL DIFFERENCES, OTHER PROBLEMS COMPLICATE REGIONAL ECONOMIC DEVELOPMENT

Moscow POLITICHESKOYE SAMOOBRAZOVANIYE in Russian No 2, 1981 pp 84-91

[Article by K. Vavilov: "Social Problems in the Development of the Unified National Economic Complex of the USSR"]

[Text] Defining the prospects for our country's economic and social progress in the 1980's, the Communist Party bases itself on the need for making fuller use of the possibilities and advantages of mature socialist society. One of the most important features of this historic stage is consistent growth in the coordination and proportionate development of all aspects of economic and social life, expressed in particular by growth in the unity of all factors of social production, and distribution and exchange within the country. This was also reflected in the draft report of the CPSU Central Committee to the 26th CPSU Congress. It emphasizes: "Achieve dynamic and balanced development of the USSR economy, as a unified national economic complex, and proportionate growth of all of its sectors and of the economies of the union republics."

Transformation of the socialist economy into a unified national economic complex is the result of the action of the entire system of socialist economic laws, and mainly the law of planned proportionate development. It is a process of surmounting the disproportions in the economy which arose in view of various causes in previous stages of the country's history. Creation of a unified national economic complex in the USSR means attainment of a new, higher level in collectivization of production and optimization of national economic ties and the structure of social production.

Formation of a unified national economic complex is a general law of development of mature socialist society and one of the manifestations of socialism's development upon its own foundation. Depending on the concrete conditions, this process proceeds differently in different countries. It was complicated in the Soviet Union by, in particular, the vastness of the territory, the great length of transportation routes, irregular distribution of raw materials and manpower among the country's different regions, presence of a number of undeveloped regions, insufficient development of some important sectors of industry and the infrastructure, and so on.

A unified national economic complex represents a qualitatively new level in the development of the economy. It is an economy controlled on the basis of a single plan, founded on the basis of a broad array of specific-purpose social programs and exhibiting sensible territorial distribution of productive forces and proportionate intersector development, in which all basic phases of social reproduction--

production, distribution, exchange, and consumption--are balanced. Increased centralization, the October (1980) Plenum of the CPSU Central Committee noted, has tremendous significance to development of this complex as a single whole. Only a centrally organized system can effectively manage this complex and surmount bureaucratic and local-interest tendencies, while allowing room for initiative in local organs and labor collectives.

Growing unity of the economic and social aspects of the development of social production is typical of the USSR's national economic complex; in this case the role of the social aspects of the development of communism is constantly growing. This applies to both territorial and intersector cross sections of our national economy. This tendency is reflected in the 11th Five-Year Plan, presently under development, and in the program of economic and social progress spelled out by the party for the 1980's.

This article will examine only some of the social problems associated with development of the USSR's unified national economic complex, particularly the problems of migration policy in modern conditions, and certain issues associated with improving the structure of the national economy, ones having a direct bearing on social problems.

* * *

One important aspect of the economy's integrated development is sensible distribution of productive forces and improvement of territorial division of labor. The draft report of the CPSU Central Committee to the 26th CPSU Congress states the task: "Insure improvement of the distribution of productive forces with the purposes of raising the effectiveness of social production on the basis of further specialization and proportionate development of the economies of the union republics and economic regions within the country's unified national economic complex."

Before the distribution of productive forces could be made more effective, we had to surmount the historically evolved disproportions, where the bulk of the potential raw materials and energy resources are concentrated beyond the Urals while most of the consuming enterprises are in the European USSR. For this purpose we developed, and are now implementing, a program for developing Siberia, the Far East, the North, and other territories. A network of large regional and territorial-production complexes has been created in new regions of economic development--West Siberian, Kansk-Achinsk, Sayanskiy, southern Yakut, Pavlodar-Ekibastuz, southern Tajik, and others. Now, one out of every 7 rubles of capital investments is allocated beyond the Urals.

Massive industrial development of new regions naturally necessitated the resettlement of tremendous human resources in those regions and solution of complex migration problems. In and of themselves, these problems are not new; they were attacked quite vigorously in our country in the first years of socialist development. V. I. Lenin himself pointed out that a socialist state must "have the possibility for moving tens and hundreds of thousands of workers wherever the Soviet government needs them" ("Poln. sobr. soch." [Complete Collected Works], Vol 42, p 150). But the scale, significance, and methods of migration policy are undergoing change in developed socialist society. Stable growth of the population and its establishment in undeveloped regions is becoming a prerequisite of their successful development.

These problems have not been fully solved yet. Thus in 1980 Siberia and the Far East, which make up 57 percent of the Soviet Union's territory and which possess tremendous raw material and other natural resources, contained a little more than 10 percent of the population. In this case the ratio of this population to the USSR's total population is increasing too slowly, since active immigration of manpower is being accompanied by its rather significant emigration. Personnel turnover and migrational mobility of the population are higher here than in the country on an average.

All of this makes it necessary to create a highly effective mechanism of purposeful migration. In developed socialist society, this mechanism would have to be different from that used, for example, during the first five-year plans. We cannot limit ourselves here to just administrative or agitation-propaganda methods (no matter how important they might be). What we need is a well conceived, carefully weighed system of economic and social measures making people interested in resettling in new regions and, what is most important, establishing themselves there, inasmuch as the unfavorable natural and climatic factors, the occasionally difficult working conditions, and the absence of the required life support complex and a social infrastructure hinder solution of this problem.

Understatement of the role and significance of social problems is especially impermissible in these regions. Integrated development of new regions presupposes implementation of material-technical measures in organic unity with social measures. Therefore in my opinion it would be suitable to supplement the provision contained in the draft Basic Directions: "Create conditions insuring availability of personnel to newly commissioned enterprises, especially in Siberia and the Far East" with a reference to the necessity for creating all of the necessary conditions for the work, life, and rest of laborers and their families.

The concrete measures foreseen in this area include improving regional regulation of wages, increasing the allowances paid to laborers working in remote regions, increasing capital investments into housing construction, improving the quality of the latter with a consideration for natural and climatic conditions, organizing new training institutions, including those of higher education, expanding sanatorium and health resort construction, creating new sectors of economic endeavor with the purposes of raising employment, hastening construction of children's athletic and cultural-educational institutions, and so on.

It stands to reason that redistribution of labor resources among different regions of the country must proceed in such a way that it would not create or aggravate a manpower shortage. The fact is that in a number of cases, the population of Siberia and the Far East is enlarged not at the expense of regions with a surplus work force, but at the expense of those experiencing a manpower shortage. This is why we need optimum redistribution of labor resources.

During the years of Soviet rule a tremendous leap forward was made in surmounting the economic gap between the country's developed and formerly backward regions. Each union republic now has its own powerful industrial base, and its own scientific and educational centers. These improvements were accompanied by major social changes, by elimination of the differences in the social structure of nations and nationalities: by growth in the urban population, by formation of a national working class, by growth in the educational and cultural level of the indigenous population, by active inclusion of women in social production, and so on. In one way or another, this process is still going on in developed socialism.

It stands to reason that some national differences in social structure and in the manpower structure still persist today. In those republics where agriculture makes a greater contribution to the economy than the national average, and where owing to favorable natural conditions the productivity of private farms is high, and where a high birth rate is absent, the proportion of the population employed in the state sector of the economy and in the social production of kolkhozes, and especially that of women, is somewhat lower, migrational mobility is lower, and urbanization is proceeding more slowly.

Thus in 1979 the proportion of women within the total force of blue and white collar workers varied among different republics from 54 percent in Estonia to 39 percent in Tajikistan. And although women do perform important functions outside of production in regions of low female employment in the national economy (the reproduction indicators for the population are the highest in such regions), the reserves for active participation of women in social production are still present.

There are also significant differences in the growth trends of the urban population. In 1979 the deviations in the proportion of the urban population of certain autonomous administrative units from the national average reached as much as 49 percent, while in terms of the union republics these deviations varied from a maximum positive deviation of 7 percent in Estonia to a maximum negative deviation of 28 percent [illegible] Tajikistan. Both absolute and relative growth of the urban population and, consequently, absolute and relative reduction of the rural population is an average statistical trend common to the entire country. Thus in the period between the last two national censuses (1970 and 1979) the urban population increased by 27.6 million, or by 20 percent, and its proportion within the total population increased by 6 percent.

Growth of the urban population is a consequence of various processes: migration of the rural public to the cities, transformation of rural settlements into cities and towns, construction of new cities, and natural growth of the urban population. The first two factors are the most important here. In the 9 years between the last two censuses, they were responsible for 57 percent of the increment in urban population. But these processes proceed differently in different republics and regions, and consequently urbanization is proceeding in different ways. In the 1970's, the greatest reduction in rural population occurred in the Russian Federation and in the Ukraine (though it did occur in different areas and in different ways).

But at the same time we have republics in which the majority of the population continues to live in the countryside (52 percent in the Turkmen SSR, 61 percent in the Kirghiz SSR, and 60 percent in the Moldavian SSR). Thus because of natural growth in the rural population, its proportion within the total population of the Turkmen SSR and Tajikistan has remained practically the same. Moreover this pertains primarily to the indigenous nationalities, while growth of the urban population in these and in a number of other regions is occurring to a significant extent due to immigration from other parts of the country. There is one more important consequence of the sluggish growth of the urban population in a number of the republics: slow change in the class structure of the population to include relatively slow incorporation of indigenous nationalities into the working class.

Persistence of tangible differences in the economic and social structures and in the nature and rates of the population's social mobility in different regions of the country is having a significant influence upon formation of the unified international economic complex. On one hand relative surpluses of manpower are developing in a number of national regions, while on the other hand the manpower demands of industry, transportation, and construction are being satisfied in such regions at the expense of regions of the country experiencing a shortage of labor resources.

All of these phenomena are objective in nature, and the process of surmounting them is simultaneously objectively dependent and purposefully controllable, meaning that broad economic, organizational, and cultural measures can and must be implemented. The draft Basic Directions indicate the need for making fuller use of Central Asia's labor resources, and particularly for expanding the training of the local public for skilled jobs, especially the rural young. In my opinion we should add to this that it would be desirable to improve the efforts to provide vocational orientation for the rural young. Orientation of larger groups of young nationals toward selection of "urban" professions and occupations is one of the mandatory prerequisites of raising the growth rate of the urban population by the addition of the indigenous residents of the republics, of faster replenishment of the working class, and of optimization of the structure of national labor resources.

We should note that in a number of cases poor or inadequate knowledge of Russian--the language of international communication--is a circumstance that hinders migration of the indigenous population. This problem is rather broad in importance to the country as a whole. Thus according to the 1979 population census, 63.4 million persons of non-Russian nationalities were unable to demonstrate that they were able to use the Russian language fluently. Although the census did reveal a decline in the size and proportion of the non-Russian population that was not fluent in Russian--from 51 percent in 1970 to 38 percent in 1979, it should be kept in mind that for a number of nationalities these indicators are still higher than the union average. In his message to participants of the All-Union Scientific-Theoretical Conference "The Russian Language--the Language of Friendship and Cooperation of the Peoples of the USSR", Comrade L. I. Brezhnev noted: "Fluency in Russian, in addition to one's native language, voluntarily accepted as a common historic attribute of all Soviet people, promotes further consolidation of the political, economic, and spiritual unity of the Soviet people."

Implementation of all these measures will doubtlessly promote acceleration of social processes corresponding to the laws of mature socialist society, further equalization of the economic and social structures of the republics and other national and state formations, and consequently, greater internationalization of the USSR's economy and its further development as a unified national economic complex. These measures will promote completion of the task posed in the draft Basic Directions: "Increase the contribution made by each union republic to the solution of general state problems."

Improvement of the unified national economic complex presupposes development of all sources of its growth and all of its aspects--both economic and ecological on one hand and the broadest social aspects on the other. This is also a reflection of an integrated approach to management of the economy. I am referring to development of each republic, each region, kray, and oblast as a unified socioeconomic complex. The tasks of integrated economic and social planning and control are being completed today at all levels--by both central and local government organs.

The Law "On the Basic Powers of Kray and Oblast Soviets of Peoples Deputies and of the Soviets of Peoples Deputies of Autonomous Oblasts and Autonomous Okrugs", adopted by the Third Session, Ninth Convocation of the USSR Supreme Soviet, establishes that a kray or an oblast Soviet of Peoples Deputies "develops, as part of the plans for the economic and social development of the kray or oblast, summaries for the entire complex of measures associated with social development, and foresees, within these summaries, measures aimed at improving working conditions, raising the skill levels and occupational proficiency of workers and the general educational and cultural level of the population, improving housing and cultural-personal conditions, improving medical services, and other measures associated with social development and culture, in coordination with the targets of production development, capital construction, and growth in the effectiveness of the latter."

As we can see, this law clearly spells out the tasks of the soviets associated with developing the krays and oblasts as socioeconomic complexes.

* * *

In addition to a territorial aspect, formation and further improvement of the unified national economic complex has a clearly expressed intersector aspect, requiring harmonious, proportionate development of not only the leading industrial sectors making up the basis of the national economy, but also all other sectors. Comprehensive development of the economy is an important trait of the USSR's national economic complex.

In essence, from the structural, sector aspect, the unified national economic complex is an intricate interacting system of a number of sector complexes: fuel and power, construction materials, machine building, agroindustrial, the complex represented by the productive infrastructure and the multisector complex of the social infrastructure, and so on. Directly or indirectly, each of these complexes is associated with social problems, with improving the citizen's working and living conditions, with his physical and spiritual development, and with his development as a producer and as a consumer of material and spiritual blessings, since the ultimate beneficiary of any form of production in socialism is the individual. In other words the functions of all sectors of the national economic complex are subordinated to the action of the basic economic law of socialism. Their functions differ in that some sectors satisfy the individual's needs directly, while others do so indirectly, insuring the presence of the initially required material base, equipment, implements of labor, and so on.

One of the most important social problems is that of raising the material and cultural standard of living of the people, of creating the conditions for comprehensive development of the personality. "To create the conditions for fuller satisfaction of the entire population's demands for high-quality and diversified foodstuffs, industrial goods, and cultural and personal articles"--such is the task posed in the draft Basic Directions.

Development of agricultural production has priority significance in this task. It cannot be examined in isolation from the system of procurement, transportation, and processing of foodstuffs. These national economic sectors, emphasized Comrade L. I. Brezhnev, form a single food complex which must be planned and controlled as as a single whole. Problems associated with development of the agroindustrial complex and the food complex contained within it were examined in the journal POLITICHESKOYE SAMOOBRAZOVANIYE (see in particular the article by P. Paskar', "Development of the Agroindustrial Complex of the USSR"; No 10, 1980). Therefore we will dwell here only on issues pertaining to other spheres of the national economy, ones which also play an important role of satisfaction of the Soviet people's needs.

I will discuss, first of all, production of consumer goods by industry, products in what is referred to as group "B".

In the transitory period and in the early stages of socialism's development, production of group "B" products did not enjoy sufficient development. The specific conditions of the transition to socialism in our country placed priority on tasks such as eliminating the devastation of the world and civil wars, and creating heavy industry--the foundation of all of the country's industry and defense. In order to offer opposition to capitalist encirclement in economic and military respects, we had to limit ourselves in everything, including personal consumption, investing our assets into heavy industry. During the first five-year plans, reallocation of accumulated assets into the development of production of the resources of production from group "B" and from agriculture was a necessary, though forced, measure. This resulted in a significant gap in the rate of development of group "A" and "B" industrial goods.

The lag in development of group "B" reduced the rate of growth of national income in comparison with the growth of gross production, it reduced the proportion of national income channeled into personal consumption, and it led to a gap between consumer goods production and affordable consumer demands, to a gap between the growth rates of productivity and wages.

After developed socialism came into being in the USSR, qualitatively new conditions arose for raising the people's material welfare. The social orientation for production assumed decisive significance. Comrade L. I. Brezhnev emphasized at the 24th CPSU Congress: "...and our goals, our higher economic potential, and the need for developing the national economy are making a more-profound turn of the economy toward solution of diverse problems associated with raising the people's welfare possible and necessary". The party declared raising the material and cultural standard of living of the laborers the supreme goal of its economic strategy.

The CPSU Central Committee's draft report called insuring further growth of the Soviet people's welfare the chief task of the 11th Five-Year Plan. Hence we observe change in the role and significance of sectors manufacturing products in direct satisfaction of consumer demand. Presence of a powerful heavy industry also affords a much greater possibility than before for providing the resources of production to agriculture, to light and food industry, and to other sectors within the second subdivision of social production. Production of consumer goods is also rising at heavy industry enterprises.

All of this has created the preconditions for bringing the growth rates of the two subdivisions of social production closer together. Differences between the rates declined noticeably in the 1970's. In the 11th Five-Year Plan, consumer goods production in industry is to be expanded at a higher rate than production of the resources of production. As Comrade L. I. Brezhnev emphasized, consumer goods production will develop on the basis of a long-term program uniting the efforts of all sectors upon which it depends.

Accelerated development of the production of goods in group "B" does not at all mean reducing our attention to heavy industry, which will continue to form the foundation of the material-technical base of socialism, the foundation for reequipment of all national economic sectors, for strengthening the country's defense capabilities, and for raising the people's welfare. The approach to development of the second subdivision of social production is fundamentally new today in that for the first time we have the possibility for planning, financing, and modernizing this subdivision, orienting ourselves not so much on its relationship to the first subdivision as on satisfaction of the optimum demands of society and the people, and on the structure of consumer demand.

One important aspect in the formation and improvement of the country's unified national economic complex is comprehensive development of the social infrastructure, which represents the aggregate of sectors, institutions, and organizations promoting favorable conditions for the vital activities of people in labor, culture, and the personal area. In the stage of mature socialism, when the economy is developing under the growing influence of the material and spiritual demands of the individual and of the society as a whole, the role and significance of the social infrastructure is constantly growing. Moreover the degree of its development is becoming one of the most important indicators and criteria of the maturity of the economy itself. It is precisely here that we can envision the social orientation of economic progress most clearly.

The social infrastructure of our national economy is a multisector, rapidly developing sphere. According to the data of experts, as of the end of the 1970's it consisted of not less than 16 integrated sectors and more than 50 subsectors, and it was characterized by a high degree of division of labor. It includes the material and organizational components of sectors such as public health, general and vocational education, trade and personal services, housing and municipal services, vacation institutions, athletic institutions, cultural institutions, and so on. In my opinion the draft Basic Directions should define the concept itself of "social infrastructure," and it must be managed as a single whole, in the same way that we relate to the country's agroindustrial complex.

Insufficient development of the services means unjustifiably high outlays of time and labor to satisfy daily personal needs. Tens of billions of man-hours are expended each year on self-service, on selecting and acquiring goods, and on preparing food. The lag of the services trade in particular, behind the modern demand is capable of having a negative effect on the end results of work in the productive sectors.

Improvement of trade, viewed as one of the sectors of the unified national economic complex, requires its conversion to an industrial basis, improvement of its equipment, and use of progressive organizational methods that have recommended themselves well in industry. Today, many shortcomings stem from the fact that the capital-labor ratio, mechanization, organization and, as a consequence, labor productivity in trade are far behind industry. Consequently there is much to be done in this area.

Growth in the significance of the services is causing an increase in the absolute number and proportion of workers in these sectors. Thus in the period from 1940 to 1979 the total quantity of workers employed in trade nearly doubled, while their proportion among all workers grew from 5 to 8 percent. At the same time the shortage of manpower in trade is growing. In 1971 the work force was short by 211,600 persons, or 2.7 percent, while in 1979 it was short by as much as 350,500 persons, or 3.9 percent.

Development of the entire complex of sectors directly satisfying the needs of the population (agriculture, light and food industry, trade and personal services, and so on) allows us to significantly raise the consumption level of the Soviet people. As an example in the period from 1940 to 1979, the rate of retail commodity turnover in our country was 7.5 times ahead of the population's growth rate. During the 11th Five-Year Plan we are to increase retail commodity turnover in state and cooperative trade by 22-25 percent, and the volume of personal services by about 1.4-1.5 times. The material-technical base of trade will be strengthened, and it will be supplemented by new, skilled workers. All of this will make it possible to improve services to customers, raise labor productivity in this area, and promote its industrialization.

* * *

Improvement of the unified national economic complex of the USSR, both as a whole and in its individual aspects--structural, territorial, intersector--is most intimately associated with solution of important social problems. In combination with other factors, this will create the conditions for successive realization of the highest goal of the Communist Party's economic strategy.

COPYRIGHT: Izdatel'stvo "Pravda", "Politicheskaya Samoobrazovaniye", 1981

11004
CSO: 1800/423

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

LACK OF DEPARTMENTAL COORDINATION IMPEDES PROGRESS

Priority Research Problems Suggested

Moscow PRAVDA in Russian 12 Feb 81 p 3

/Article by G. Karkhin, head of the division of the Scientific Research Economic Institute under the USSR State Planning Committee, doctor of economic sciences: "From Problem to Research"/

/Text/ As is well known, important party and government decrees on improvement in the economic mechanism have been adopted in our country recently. It seems that their successful implementation depends, among other things, on whether it will be possible to increase the yield of economic science.

One can say that the formation of a network of scientific research economic institutes--under the USSR Academy of Sciences, the USSR State Planning Committee, the state planning committees of the Union republics, state committees, ministries and departments--was completed during the past decade. There are economic institutes in Leningrad, Kiev, Novosibirsk, Minsk and a number of other cities.

Economic science now has skilled personnel, modern equipment and a considerable reserve of theoretical and methodological studies of social and economic problems.

Nevertheless, on the whole, the yield still lags behind the possible yield. The unclear direction and insufficient coordination of research is primarily reflected in this. This creates disconnected actions and unnecessary parallelism.

One cannot say that attempts to unite economic scientists around the solution of major social and economic problems have not been made. However, the forms of management of economic science and of coordination of the research of economic institutes of various departments and laboratories of universities and higher educational institutions created in the 1970's do not prove their value now. The relations between economic science and practice are still weak.

For example, many hopes were pinned on scientific councils, which were supposed to unify scientists in various departments. The Council for Examination of Major Social and Economic Problems of Long-Term Plans and Research Results in Economic Sciences was established in 1973. It included managers of the USSR State Planning Committee and its divisions, academicians and directors of many institutes. However, a number of the council's sections did not begin their work. The same can be said about some other interdepartmental councils established under the State Committee for Science and Technology at one time.

Unfortunately, the proper coordination of economists' research, even when they work in one department, for one leading client, has not yet been ensured. For example, five economic institutes have been established and operate in the system of the USSR State Planning Committee. No fewer scientists than workers in the central apparatus of the USSR State Planning Committee work in them. Furthermore, institutes have been established under the state planning committees of the Union republics. As a rule, however, these collectives work separately. About 2 years ago the management of the USSR State Planning Committee convened a conference of representatives of economic institutes of its subordination, where urgent problems of work were discussed. However, this measure was of a one-time nature.

How to unify and better direct and coordinate the research of economic scientists? The old forms--councils--can also be used, but for this it is necessary to transform them considerably. They should be permanent and active working organs with an efficient program of actions and a system of reporting and control. The direction of the work of councils and their sections should be specific, not diffused. With regard to the composition of councils, it would be more useful to include in them scientists and practical specialists, who have both the prestige and possibility of specifically participating in the coordination of research and in a discussion of its results, not honorary representatives.

However, the most important thing is perhaps to improve the procedure of drawing up the state scientific research plan and the research plans of institutes. The point is that, usually, preliminary draft plans are drawn up with due regard for the formed research trends, which depend in large measure on the scientific interest of executors. However, life demands that the "priority problem" be considered of paramount importance in research and that the research program of every institute and executor be formed depending on it.

The leading role of the USSR State Planning Committee should be manifested here. Leading specialists together with department managers and scientists should assume the responsibility for determining the range of priority problems and establish the order of their solution. Only around a substantiated "order" is it possible to unify and coordinate scientists' research. On this basis it is much easier to establish contacts with practice, to delimit responsibility, to set up control over execution and to activate incentives.

The establishment of sections for an examination of materials and preparation of suggestions for key problems of the national economy, its sectors and economic regions, as well as object programs, has now been envisaged. Members of the USSR State Planning Committee will manage such sections. Improvement in the management of work of the institutes under the USSR State Planning Committee is also envisaged. Intensification of the coordinating role of the USSR Academy of Sciences and of the State Committee for Science and Technology is indispensable.

That is why I suggest that the third section of the draft of Basic Trends be supplemented with the following statement: "To improve the planning and coordination of economic research, to strengthen the contacts between economic scientists and economic practice and to intensify their participation in the development of priority problems of economic and social development, as well as in the economic mastering of scientific results."

Object Program Methods Proposed

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 24 Mar 81 p 2

/Article by B. Mil'ner, professor, doctor of economic sciences, Moscow: "How To Overcome Lack of Coordination"/

/Text/ It is not accidental that overcoming the lack of departmental coordination is now considered one of the urgent tasks of the present stage of improvement in economic management. The point is that the narrow limits of separately taken sectorial or territorial management bodies have begun to impede the solution of overall economic and scientific-technical problems. There is an objective contradiction between the intensifying division of labor and the organization of its cooperation and between the high level of administrative isolation of sectorial management bodies and, frankly speaking, the weak coordination of their actions.

How to overcome this contradiction? First of all, it is necessary to give up the traditional and long-obsolete view that sectorial and territorial management systems can operate independently--separately from each other. It is also necessary to more sensibly, without idealizing, nor minimizing, the possibilities, develop object program methods of economic management. By means of them it is possible to attain a real coordination of the activity of central, sectorial and local management bodies in the interest of an efficient solution of key problems of national economic development.

Where and in the solution of which problems is it best to use program management? It cannot be said that we have accumulated rich experience in this area, but certain steps have been taken. Apparently, today it is more correct to talk about how to accomplish the tasks set by the 26th party congress in the best and fullest way.

Now it is fundamentally important to overcome departmental limits. Only in this way is it possible to attain a multisectorial utilization of scientific and technological achievements.

The need for such an approach is exemplified with special clarity by scientific production associations. The object of their establishment is to ensure an organic unity of scientific research, technical developments and production. About 250 scientific production associations operate in our country and all of them solve primarily intrasectorial problems.

For now one way out is seen, that is, to establish intersectorial scientific production complexes systematically and without departmental ambitions. The overall programs for the solution of major scientific and technical problems that will be worked out in this decade would be in the center of their attention.

Of course, such associations should not remain aloof from the development of sectorial programs. However, their intersectorial status will ensure an overall approach to such programs and will make it possible to create models of new equipment and technology at the best world level with lower expenditures and to widely introduce them into production.

On the other hand, an appropriate organizational and planning accompaniment would be created for every overall program. What management forms can be here?

For example, on the basis of combination of sectorial and territorial management. Such experience is already available. I have in mind the interdepartmental territorial scientific production complexes in L'vovskaya Oblast at the base of the Western Scientific Center of the USSR Academy of Sciences. Their activity is determined by contracts on cooperation and statutes approved by the ministries and departments of head enterprises and scientific research institutes. Public scientific and technical councils and boards manage such associations. They develop a single technical policy and long-term programs for acceleration of scientific and technical progress at the appropriate enterprises in a region and organize and control their fulfillment.

Of course, the development of public principles in the management of intersectorial relations is a good thing. However, our planning system also makes it possible to use such forms as the establishment by sectorial ministries on a cooperative-contractual basis with a share allocation of funds of special scientific production organizations for the elaboration of urgent overall problems in which they are interested.

There can be several variants. In particular, it makes sense to establish for such programs temporary object management bodies in leading ministries, or, for example, in scientific production and production associations, scientific research institutes and design organizations. General coordinators and councils of legally entitled representatives of ministries and coexecutor organizations should manage them. Thereby, specific bodies and individuals bearing the full responsibility and coordinating all the efforts within a specific program will be determined.

It is not even a matter of one variant or another. The most important thing is that there will be a management lever by means of which it will be possible, as L. I. Brezhnev said at the 26th party congress, to more closely join--economically and organizationally--scientific research and planning design work with production and to more fully concentrate the efforts of "large-scale science" on the solution of key national economic problems and on discoveries capable of introducing truly revolutionary changes in production.

The formation of a mechanism of management of overall national economic object programs for the solution of key economic and social questions becomes another key problem of program management. A decision on the development of 15 such programs for this five-year plan and for the future was adopted. In their nature they are intersectorial, are directed toward a simultaneous solution of a wide range of problems, are calculated for a long period and require large capital investments. Apparently, they will consist of a number of interconnected, but, at the same time, relatively independent subprograms.

Who will guide them? What will be the procedure of management of programs and subprograms? What rights should head organizations have? What can be the extent of their and their subcontractors' responsibility for the fulfillment of the envisaged measures? As yet there are no clear answers to these questions.

These answers should be found and the sooner, the better. The urgent problems of management of the West Siberian Petroleum and Gas Complex convince us of this. It is formed as the country's unique fuel-power and petrochemical base. Several sectorial ministries and hundreds of organizations of many departments participate.

A commission on problems of development of the West Siberian Petroleum and Gas Complex of the USSR Council of Ministers has now been formed and an interdepartmental territorial commission under the USSR State Planning Committee will work in Tyumen'. As L. I. Brezhnev said, "this is a step in the right direction. It helps to better manage territorial production complexes and to better take into account and combine regional and sectorial interests. Such work should be continued."

This is especially important, because such an organizational form is also acceptable in the management of other major regional programs, such as the formation of industrial power complexes in the Angaro-Yenisey Region, economic development of the zone of the Baykal-Amur Trunk Line and establishment of the agrarian-industrial complex in Siberia's southern regions.

Depending on the scale and nature of programs it makes sense to establish or assign object management bodies--temporary territorial sectorial commissions or bureaus and head ministries or departments--according to the principle of preferential interest in the final product. It is also possible to establish territorial economic associations on the basis of a share participation of a group of interested sectorial ministries. In any case, however, program management bodies should have resources and the necessary rights to utilize them in order to fully ensure an overall approach to work. Only in this way will it be possible to overcome the lack of departmental coordination in the solution of major national economic problems.

11,439
CSO: 1820/146

PLANNING AND PLAN IMPLEMENTATION

BACHURIN, MINISTER DISCUSS PLAN CONTROL FIGURES

Development of Control Figures

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 81 p 4

[Interview with A. V. Bachurin, deputy chairman of the USSR State Planning Committee, by correspondent of EKONOMICHESKAYA GAZETA: "Control Figures for the Five-Year Plan"; date and place not specified]

> [Text] The decree of the 26th CPSU Congress entrusted the USSR Council of Ministers with working out in accordance with Basic Trends a draft of the state plan for the economic and social development of the USSR for 1981-1985 and with submitting it to the USSR Supreme Soviet for consideration in October 1981.
>
> According to the established planning methodology in accordance with Basic Trends the USSR State Planning Committee develops control figures for the forthcoming five-year plan (with an annual distribution) and assigns them to USSR ministries and departments and to the councils of ministers of the Union republics, which in turn ensure the assignment of control figures to associations and enterprises. Such a procedure of development of the five-year plan helps labor collectives to expand the competition directed toward uncovering reserves and increasing production efficiency.
>
> A. V. Bachurin, deputy chairman of the USSR State Planning Committee, related the course of development and assignment of control figures to a correspondent of EKONOMICHESKAYA GAZETA.

[Question] How is the system of indicators built when control figures are established for ministries and departments?

[Answer] In the report at the 26th Party Congress L. I. Brezhnev stressed that the 11th Five-Year Plan should become a five-year plan of intensification of all public production. Only on this basis is it possible to attain a significant rise in the people's well-being and the implementation of the social and economic program developed by the 26th Party Congress. All the indicators, norms, standards and material, labor and cost balances developed within the structure of the five-year plan are based on a solution of this pivotal problem.

The USSR State Planning Committee assigned control figures to ministries and departments for several groups of indicators. The group of indicators characterizing production includes the following: rates of growth of commodity output in comparable prices; share of products in the superior-quality category in the total production volume; production of basic items in physical terms.

Control figures for the production of products for cultural-general and household purposes were established for all ministries.

Special attention was paid to indicators characterizing the work of ministries on saving various types of material resources. The list of some types of material resources, for which an assignment for an average reduction in expenditure norms was established, was expanded. New indicators--coefficient of metal utilization and assignment for an average reduction in the total specific expenditure of metal--were introduced.

In labor control figures were assigned for four indicators: labor productivity growth; limit of the number of workers and employees; standard of wages per ruble of output; assignment for a reduction in manual labor.

Control figures were also established for groups of indicators pertaining to capital construction, improvement in management and protection of nature, for standards of formation of incentive funds and for some others.

/Question/ Are there any sectorial characteristics in the establishment of control figures?

/Answer/ There are such characteristics. For example, for some ministries working under the conditions of planning and evaluation of work according to the indicator of normative net output control figures for rates of growth of production and labor productivity were established in normative net output. Wage standards are also calculated per ruble of normative net output. There are four such ministries--Ministry of Heavy and Transport Machine Building, Ministry of Power Machine Building, Ministry of Machine Building for Animal Husbandry and Fodder Production and Ministry of Machine Building for Light and Food Industry and Household Appliances. In 1982-1983, as other ministries adopt normative net output, their five-year assignments will be recalculated according to this new indicator.

For an organization of material incentives fund-forming indicators were established for ministries. They are different for different ministries. For example, for the USSR Ministry of Ferrous Metallurgy, the Ministry of Heavy and Transport Machine Building, the Ministry of Tractor and Agricultural Machine Building, the Ministry of the Automotive Industry and some others they are labor productivity growth and share of products in the superior-quality category and for the USSR Ministry of the Food Industry and others, labor productivity growth and increase in the production volume. Share of products in the superior-quality category and increase in the production volume were adopted for the USSR Ministry of Light Industry and petroleum and coal extraction in physical terms (ton rates), as fund forming indicators for the USSR Ministry of Petroleum Refining and Petrochemical Industry and the USSR Ministry of the Coal Industry respectively. Control figures were assigned to ministries with due regard for these indicators.

/Question/ What work is done in ministries in connection with the development and assignment of control figures to associations and enterprises?

/Answer/ In accordance with the decree dated 12 July 1979 of the CPSU Central Committee and the USSR Council of Ministers USSR ministries and departments and the councils of ministers of the Union republics must ensure the assignment of control figures to associations, enterprises and organizations.

Ministries assign control figures to subordinate associations and enterprises, taking their sectorial characteristics into consideration. For example, the Ministry of Machine Building for Animal Husbandry and Fodder Production has established that control figures for all-Union industrial associations are assigned for volumes of production of products and machines for animal husbandry and fodder production, capital investments and commissioning of production capacities. In accordance with these assignments all-Union industrial associations establish control figures for production associations and enterprises.

Ministries must ensure a strict and unconditional correspondence of the indicators envisaged in the plan to the assignments of Basic Trends. This imposes on them special responsibility for the substantiation of the control figures that they assign to subordinate associations and enterprises. After all, control figures are the basis for the development of the drafts of five-year plans in labor collectives.

When the drafts of five-year plans are drawn up, it is important to ensure a correct combination of centralized assignments with the maximum possible development of the economic initiative of associations and enterprises and with an increase in the role of labor collectives in the development of optimum plans. The accountability report of the CPSU Central Committee to the 26th party congress notes that the initiative of labor collectives helps to uncover and activate production reserves and to increase the efficiency and quality of work. Counterplans and other such undertakings along the line "from the bottom upwards," that is, worker, brigade, enterprise and sector, should be considered of paramount importance in labor competition.

The development of the initiative of labor collectives should be directed toward the attainment of higher end results with lower material and labor expenditures per unit of output.

Ministries are responsible for the stepped-up nature of plans developed by associations and enterprises. Therefore, they must intensify specific assistance and see to it that the work on the preparation of five-year plans in labor collectives is done on the basis of economic and engineering calculations with a mandatory utilization of the data of enterprise passports.

It should be mentioned that, guided by control figures, ministries, associations and enterprises, simultaneously with the draft of the five-year plan, together with sales organizations should work with consumers and suppliers to determine the list (assortment) of products for the conclusion of economic contracts.

All this work should be performed on the scheduled dates so that in October of this year, as envisaged by the party congress, the draft of the five-year plan may be submitted to the USSR Supreme Soviet for consideration.

Assignment of Control Figures

Moscow EKONOMICHESKAYA GAZETA in Russian No 13, Mar 81 p 4

/Interview with M. S. Shkabardnya, USSR minister of instrument making, automation equipment and control systems, by a correspondent of EKONOMICHESKAYA GAZETA: "Sectorial Five-Year Plan Is Formed"; date and place not specified/

> /Text/ The decree of the 26th CPSU Congress entrusted the USSR Council of Ministers with working o[illegible] with Basic Trends a draft of the state plan [illegible]cial development of the USSR for 1981-1[illegible]5 and with subm[illegible]ing it to the USSR Supreme Soviet for consideration in October 1981.
>
> The course of development and assignment of control figures for the 11th Five-Year Plan to ministries and departments was discussed in an interview with A. V. Bachurin, deputy chairman of the USSR State Planning Committee, in No 12 of EKONOMICHESKAYA GAZETA.
>
> Today M. S. Shkabardnya, USSR minister of instrument making, automation equipment and control systems, discusses the practice of assignment of control figures by the ministry and the development of drafts of five-year plans by associations and enterprises.

/Question/ Mikhail Sergeyevich, have control figures been assigned to all associations and enterprises?

/Answer/ Yes, all the sector's associations and enterprises received control figures for the development of drafts of five-year plans for 1981-1985 on the scheduled date. This made it possible to expand in labor collectives the work on the search for intraproduction reserves at every work place and in every brigade and shop.

Considerable attention was paid to the technical and economic substantiation of assignments and to their stepped-up nature and reality. The control figures assigned to associations and enterprises are based on standards for the utilization of production capacities and progressive norms of expenditures of labor, materials and fuel and power resources. Such calculations are based on the data of passports of enterprises and associations.

Control figures were assigned for the following basic indicators: rates of growth of commodity output, share of products in the superior-quality category in the total production volume, production of basic items in physical terms, labor productivity, standard of wages per ruble of output, limit of the number of workers and employees and others. Control figures were established in normative net output for three all-Union industrial associations, which adopted planning and evaluation of activity according to the indicator of normative net output in 1 January 1981. Guided by control figures, ministries, associations and enterprises, simultaneously with the draft of the five-year plan, together with sales organizations work with consumers and suppliers to determine the list (assortment) of products for the conclusion of economic contracts. This is a very important direction in the work of associations and enterprises during the period of formation of draft plans. In order to attain a full balance and stability of the five-year plan, it is necessary to properly set up its material and technical supply. There are still many difficulties in these matters. The ministry constantly sees to it that the outlined draft plans of associations and enterprises submitted for consideration are balanced with material resources.

/Question/ What is the role of labor collectives in the formation of stepped-up programs for the five-year plan?

/Answer/ It is difficult to overestimate it. Essentially, the five-year plan is now being formed in labor collectives. The search for specific ways of successfully fulfilling the decisions of the 26th CPSU Congress is conducted there. The initiative of labor collectives helps to uncover and activate production reserves and to increase the efficiency and quality of work. As the experience of the sector's advanced collectives shows, the stepped-up nature and substantiation of plans depend primarily on how actively and purposefully the search for intraproduction reserves is conducted at every work place and in every brigade and shop.

It should be stated that the system of formation of incentive funds existing since the 11th Five-Year Plan contributes to an active search for reserves and their inclusion in the plan under the new conditions. Its essence is as follows: For the adoption of a five-year plan exceeding the assignment of control figures and its fulfillment deductions into economic incentive funds are made according to higher standards.

Standards for the determination of sizes of economic incentive funds (in our sector they are formed for the indicators of labor productivity growth and share of products in the superior-quality category in the total production volume) were established for all associations and enterprises simultaneously with control figures. The collectives that adopt five-year plans for these indicators exceeding the assignments of control figures make deductions into economic incentive funds according to standards increased fourfold. Thus, they are interested in the development of drafts of five-year plans envisaging higher assignments for an increase in production efficiency.

The ministry drew up a schedule for the completion of the development of drafts of five-year plans for all associations with an indication of specific dates. Strict control over the fulfillment of this schedule was established.

Production innovators, scientists, engineers, economists and the entire party and economic aktiv of enterprises, associations and ministries take part in the development of the draft of the sector's new five-year plan.

Specific proposals for the approval of plans for indicators exceeding the assignments of control figures for the ministry have already begun to arrive from some associations. For example, the collectives of Soyuzanalitpribor enterprises searched for reserves for an increase in the established volume of output of instruments for the control and regulation of industrial processes. Associations also make proposals for an improvement in the qualitative indicators established by control figures.

Of course, the elaboration of the draft of the five-year plan does not proceed without difficulties. For example, the Soyuznauchpribor Association, instead of searching for measures for an additional increase in efficiency, envisaged in the draft an assignment somewhat lower as compared with control figures. The ministry suggested that the association review the plan and search for possibilities for an unconditional fulfillment of assignments.

The search for intraproduction reserves and the development and realization on this basis of counterplans in brigades, sections, shops and the enterprise as a whole make it possible to form stepped-up, but realistic, five-year plans.

/Question/ How will the policy of production intensification be reflected in the formed five-year plans?

/Answer/ Control figures for the 11th Five-Year Plan envisage a rise in the technical level of computer hardware, instruments and automation equipment on the basis of the latest achievements in microelectronics, optoelectronics and laser technology.

In 1985, as compared with 1980, the production of instruments, automation equipment, computer hardware and spare parts for them is to be increased by 40 percent.

An increase in the share of growth of output as a result of a rise in labor productivity is an important indicator of production intensification. According to rough drafts, this indicator will comprise about 90 percent in the sector in 1985.

The fulfillment of the assignments for the introduction of advanced technology and retooling of enterprises determined by control figures will make it possible to save the labor of no less than 100,000 workers and to give about 200 million rubles of economic effect as a result of a reduction in the labor and material intensiveness of output during the five-year plan. The share of manual labor will decrease from 39.6 to 36.9 percent.

Control figures also envisage an improvement in the quality of output. In 1985 the share of products in the superior-quality category in the volume of commodity output subject to certification will comprise 72 percent.

In accordance with control figures in the 11th Five-Year Plan it is necessary to ensure a significant saving of material resources. For example, plans have been made to reduce the need for rolled ferrous metal products by 23 percent and for rolled nonferrous metal products, by 12 to 15 percent. This is almost 30 percent higher than the assignments for the 10th Five-Year Plan.

In connection with this the sector's labor collectives now face the task of especially carefully approaching the formation of draft plans with due regard for the most efficient utilization of material resources, sharp reduction in losses and utilization of materials according to the direct purpose.

I would like to note that the introduction of new methods of management and an active utilization of cost accounting on a sectorwide scale plays an important role in the cause of efficient utilization of material, financial and labor resources.

11,439
CSO: 1820/147

INVESTMENT, PRICES, BUDGET AND FINANCE

ECONOMISTS REVIEW PRICE-SETTING METHODOLOGY

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 2, Feb 81 pp 65-69

/Article by Candidates of Economic Sciences M. Zagumennov and N. Sokolova: "Procedural Questions of the Formation of Planned Accounting Prices"/

/Text/ The price as the monetary form of value is one of the most important economic categories, by means of which the main principle of the cost accounting activity of socialist enterprises and associations--the comparison of their expenditures with the economic results--is realized. The accounting of the current material expenditures on the output of products, the calculations of the receipts from the sale of its own products, the covering by means of these receipts of the expenditures of the enterprise on the output of the finished product and the formation of a certain amount of economic accumulations for the updating and increase of the fixed capital and working capital, the formation of economic stimulation funds are carried out by means of wholesale prices. All the economic processes of the socialist production enterprise are connected in one way or another with prices, which fulfill in the process of expanded socialist reproduction the functions of the measurement of the value, accounting, distribution and redistribution of the net income of society. Thus, the problems of pricing are directly interconnected with the questions of the organization of cost accounting at the socialist enterprise and at the association. Without the properly substantiated wholesale prices,cost accounting,as the most important method of socialist management at enterprises and associations,will not prompt collectives to the best use of materials, manpower and financial resources for the purposes of increasing the efficiency of social production.

Precisely for this reason in the system of measures, by means of which the tasks outlined by the 25th CPSU Congress of the utmost increase of the efficiency of social production, the improvement of product quality and the tightening up of the policy of economy in the national economy are being realized, the measures aimed at the strengthening of cost accounting and its further improvement are of substantial importance.

The wholesale prices of the enterprise are without fail involved to one extent or another in the system of cost accounting as a complex of economic relations between the socialist state and the socialist enterprise and between independent enterprises. At the same time the existence of precisely organized intraplant (shop) cost accounting is a necessary precondition of the accomplishment of complete and effective cost accounting at socialist enterprises under the conditions of large-scale socialist production.

Intraplant cost accounting is a component, a detailing and an extension of the cost accounting of enterprises. Being based in essence on the same principles as the cost accounting of the enterprise as a whole, intraplant cost accounting has its own peculiarities which stem, first, from the division of labor among the individual links of the complicated economic organism, which the socialist enterprise is, and, second, from the economic independence of the subdivisions served by it.

The point is that the shops, sections and other production units, which organize their economic operations according to the principles of intraplant cost accounting, are independent only within their own enterprise and do not enter into economic relations with other enterprises and financial organs, do not conclude economic contracts, do not have current accounts at the bank, do not purchase raw materials and do not sell products. However, the observance by each production subdivision of a large-scale enterprise of the principle of the comparison of the results of economic operations with the expenditures and the assurance of operation without a loss require the obligatory existence of a certain shop apparatus as a means of the comparable consideration in value terms of the results of the planned work of the subdivisions. The goal of such an approach is the efficient use of the fixed production capital and other material resources of each enterprise and association. The role of internal cost accounting has increased in connection with the formation of large associations which consist of production links of considerable size, at which it is not difficult to organize cost accounting owing to their territorial isolation.

Henceforth we will call all the prices, which are used for the purposes of intraplant planning and the organization of cost accounting relations among the production subdivisions of the enterprise, planned accounting prices.

Planned accounting prices are also involved in the organization of the optimum combination of the moral, material and economic stimulation of the collectives of the production subdivisions and individual workers depending on the results of their activity, in the organization of the material responsibility of the production subdivisions for the fulfillment of the plan assignments and the efficient use of the allocated assets. Effective intraplant cost accounting presumes the use of the planned accounting prices for the organization of the technical and economic planning of the work of the shops, the analysis of their results of their work with the determinination of the direct contribution of the collectives of the shops to the overall results of the operation of the enterprise and for the organization of the economic stimulation of the shops and the material incentives of their workers.

At the enterprises of a number of sectors of industry the planned accounting prices are constructed in much the same way as the formation of the wholesale prices of enterprises, that is, for the output of each subdivision of the enterprise its own internal wholesale price is calculated. The expenditures of this enterpise and a specific proportion of the profit are the basis for such planned accounting prices.

At first glance such planned accounting prices are quite attractive, for their use presumes that the profit of the enterprise is equal to the sum of the profit of all its cost accounting subdivisions. However, the formation of planned accounting prices according to such a principle is not always advisable, since it requires considerable expenditures of labor on the substantiation of the proportion of the profit, which is contained in a unit of an item, semimanufactures or services of each production subdivision. Moreover, the increase of the work connected with the organization and making of an independent calculation of the profit for each structural production subdivision of the enterprise is also required.

Since the profit contained in the planned accounting price for the output of each subdivision is realized through the wholesale prices of the enterprise, the planned accounting prices, which are formed exclusively on the basis of the planned, strictly standardized expenditures of the given subdivision, are also quite able to perform the planned accounting function in the system of intraplant cost accounting. Such planned accounting prices are simpler to form and successfully perform their main planned accounting function and the function of the comparison of the expenditures and results of economic operations.

Here the comparison of the expenditures with the results of economic operations is accomplished by comparing the planned expenditures with the actual expenditures. Their complete coincidence means that for the given subdivision the allocated production resources are being used normally. Such a situation should presume the formation of the actual economic stimulation fund also at the level of the planned amount. The excess of the actual expenditures over the planned expenditures, which are calculated in planned accounting prices, is an adverse phenomenon, while the reduction of the actual expenditures as compared with the planned expenditures is a saving of the resources which have been placed at the disposal of the given subdivisions and should accordingly be reflected in the amount of its economic stimulation funds.

The following arguments can be cited in defense of such planned accounting prices. At the enterprise the shops, production sections and units, the relations of which are confined to the economic framework of the given enterprise and association and do not enter the sphere of circulation, and therefore are of the one-sided, uncompensated nature of the transfer of the product of labor from one production subdivision to another in conformity with the prevailing processing method, act as the object of intraplant cost accounting. The collectives of the shops are given the rights to use independently the fixed capital material and manpower resources which have been attacted to them. Within the set plan assignment they organize the production processes, effect the payment for labor in conformity with its amount and quality, bear the responsibility for the efficient use of means of production and provide material incentives for the fulfillment of the plan indicators.

Under these conditions the precision and reliability of the accounting in the actually established prices of the expenditures made by subdivisions on the purchase of all the commodity stocks used in production with allowance made for transportation and procurement costs are the most important task for intraplant cost accounting.

Those planned accounting prices, which are formed according to the principle of the planned expenditures in the subdivisions of the enterprise, that is, without the inclusion in these prices of the profit which corresponds to the contribution of the given subdivision, conform more, in our opinion, to this task. Such an approach to the formation of the planned accounting cost does not contradict the fact that the state plan, which has been approved for the enterprise in the form of directive plan indicators, many of which are calculated on the basis of the current wholesale prices with allowance made for transportation and procurement costs, serves as the basis of the technical and economic planning of the work of the intraplant subdivisions.

In the system of internal cost accounting a number of indicators of the plan in value terms are also calculated on the basis of the use of the planned accounting prices which are formed according to the expenditure principle.

Thus, the planned accounting prices, for which the expenditures of the subdivisions on the output of products without regard for the profit are the basis, in essence are a permanent element of intraplant cost accounting, the planning of the economic operations of the subdivisions, the organization of the reliable calculation of the fulfillment of the set assignments and the analysis of the results of their work.

Let us dwell on some procedural questions of the elaboration and use of planned accounting prices in industry. This type of planned accounting prices is used extensively at enterprises and associations of the system of the Ukrainian SSR Ministry of the Construction and Utilization of Roads. However, the available standard documents on questions of planned accounting prices give the general direction of their elaboration in the sectors of industry and do not meet the present requirements of the organization of intraplant cost accounting. The procedural aspect of the question of the formation and use of planned accounting prices, which is presented in these documents, needs further improvement and clear definition. The main directions of the improvement and clear definition of the procedural approaches to the formation and use of planned accounting prices in these sectors of industry can be presented more completely in interconnection with the functions and tasks which the planned accounting prices perform in the system of internal cost accounting.

Planned accounting prices are a tool of internal cost accounting and serve only for internal planning, the regulation of the interrelations between the cost accounting subdivisions belonging to the oblast administrations (trusts) of the construction and utilization of roads and the evaluation of the results of their activity. They are intended for the accounting, analysis and the making of settlements for delivered products between the Administration for the Supply of Complete Sets of Production Equipment (UPTK) and road construction, road repair and construction administrations (DRSU's) and sections, mechanization administrations, subsidiary works which are carried on a contractual balance, and the transportation managements belonging to one oblast administration of the construction and utilization of roads or a road construction trust.

The use of planned accounting prices ensures the proper reflection of the results of each cost accounting subdivision and promotes the strengthening of cost accounting, the reduction of the production cost, the growth of the profit and the increase of the efficiency of the work of the association as a whole. From this it follows that particular attention should be devoted to the procedural questions of the elaboration of planned accounting prices as a necessary condition of the strengthening of the standard base of the construction organization. Accounting prices play an important role in the planning and analysis of the sectional and brigade cost of operations, since the actual expenditures are compared with them as a standard value, the saving in the use of production resources or their excessive consumption is determined.

With reference to the production conditions of the enterprises and associations of the system of the Ukrainian SSR Ministry of the Construction and Utilization of Roads the structure of the planned accounting price can be represented in the form of the following components:

1) the current wholesale factory prices of industry (P_{wf}, rubles per m^3), at which the purchase of materials from outside for road construction operations is made, or the planned cost of a unit of output produced by subsidiary works (C, rubles per m^3);

2) the expenditures on packaging and particulars, if they are not included in the wholesale factory price for the materials (E_p);

3) transportation costs for all types of freight (C_t);

4) the markups of supply and marketing organizations (M_{sm});

5) procurement and warehousing costs (C_{pw}).

Thus, the planned accounting price [PAP] can be represented as the equation:

$$PAP = P_{wf} + C_t + M_{sm} + C_{pw}. \tag{1}$$

Let us examine the components of the planned accounting prices.

The current wholesale factory price (P_{wf}) as the initial component when determining the planned accounting prices for items and materials, which are used in road construction, is used with allowance made for the prepayment for items, the markups and discounts for specific indicators which are specified by the corresponding price list.

The bulk of the materials and items, which are used in road construction, are supplied from outside at the wholesale factory prices. Therefore, the planned accounting prices for road construction materials and items, as a rule, are determined on the basis of the wholesale prices.

The wholesale factory price (the purchase price) as a component of the PAP's takes up the greatest proportion in them.

However, the planned accounting prices for road construction materials and items, which are produced at the subsidiary works which are carried on the balance of the contractual activity of oblast administrations (trusts) of the construction and utilization of roads, can be determined on the basis of the planned costing of the production of these products. Then:

$$PAP = C + C_t + M_{sm} + C_{pw}. \tag{2}$$

Here the planned cost of the production of the products (C) with the transportation costs for their delivery from the place of production to the place of use should be less than or equal to the cost of these materials, which are obtained from outside at wholesale prices with allowance made for the transportation costs. If the planned cost of an item with allowance made for the transportation costs is greater than the wholesale price for it, the wholesale price is used as the starting point of the determination of the planned accounting prices.

The analysis of the practice of using planned accounting prices in the system of the Ukrainian SSR Ministry of the Construction and Utilization of Roads shows that at the enterprises of this system there is still no uniform procedure of determining the planned cost of the products of subsidiary works, as a result of which one of the most important conditions of the correctness of the formation of the planned accounting prices for these products is being violated. The procedural disparity in the formation of the cost of the products of subsidiary works is expressed first of all in the fact that at different enterprises which produce similar products the composition of the costing items is different.

Thus, at the Kirovograd Road Repair and Construction Administration,when compiling the costing for bitumen-rock mix,only 4 items of expenditures are used; while at the Vinnitskaya Oblast Administration of the Construction and Utilization of Roads,the costing for similar articles is compiled for 10 items of expenditure. A similar situation has also formed for other articles.

The lack of procedural unity when determining the cost of the products of subsidiary works leads to the incomparability of the expenditures and the unreliability of the planned accounting prices, which are formed on their basis, as a tool of internal cost accounting. The differences in the method of calculating the cost of the products of subsidiary works make them incomparable both within the same oblast administration of the construction and utilization of roads and with a breakdown by different oblast administrations of the construction and utilization of roads, as well as lead to the overstatement or understatement of the expenditures on the output of the same products.

In our opinion, for the purposes of increasing the validity of the determination of the planned accounting prices, the procedural unity of the determination of the expenditures which make up the cost of industrial products should first of all be ensured, and sound uniform methods of planning and calculating the cost of the products of the subsidiary works of road construction enterprises and associations should be used.

Recommendations of a procedural nature on the planning and calculation of the cost of industrial products at the subsidiary works of road construction associations were elaborated on the basis of a study conducted at the Ukrainian SSR Scientific Research Institute of Prices of the USSR State Committee for Prices. The recommendations for their use were substantiated by the requirements of "The Main Statutes on the Planning, Accounting and Calculation of the Cost of Products at Industrial Enterprises," which were approved by USSR Gosplan, the USSR Ministry of Finance, the USSR State Committee for Prices and the USSR Central Statistical Administration.

For the subsidiary works of road construction associations it is proposed to group the planned expenditures by items of expenditure in strict conformity with the mentioned Main Statutes.

One of the measures, which would increase the effectiveness of the use of planned accounting prices in the system of intraplant cost accounting, is their mandatory application to and introduction at all the associations of the system. Practical experience attests that the construction associations of the Ukrainian SSR Ministry of the Construction and Utilization of Roads, which elaborate in detail and persistently adopt planned accounting prices, have a higher level of the indicators of financial and economic operations and of all economic planning work.

But the most essential direction of the improvement of planned accounting prices is, in our opinion, the drawing up of a procedural document which describes as completely as possible the detailed procedure of their formulation for one sector or another. Of course, each sector of industry has its own pecularities of the formation of the planned accounting prices, but as a whole the procedural approach to their formulation is sufficiently general.

Using the example of the description of the procedure of forming the planned accounting prices for construction materials and items, which are used in road construction by the enterprises of the system of the Ukrainian SSR Ministry of the Construction and Utilization of Roads, let us show the main procedural aspects of their substantiation.

As was noted already, the wholesale factory prices of the corresponding ex are the main component of the planned accounting prices when formulating them for materials and items which are purchased on the side. Moreover, if the cost of the packaging and particulars is not included in the wholesale prices according to the corresponding price list, it is included in the planned accounting prices as a separate component.

Transportation costs: rail, water and motor, are the most important and most complicated components for the determination of the planned accounting prices.

The rail transportation of a ton of hauled freight (T_r) is calculated according to price list No 10-01 and is determined by the equation:

$$T_r = T_{cc} + L + C_r + T_{dc}, \qquad (3)$$

where T_{cc} is the tariff for the carrying capacity of a car (rubles); L is the loading and unloading operations (rubles); C_r is the cost to maintain the railroad siding (rubles); T_{dc} is the tariff for the delivery of cars (rubles).

River and other water transportation of a ton of freight (T_w) is calculated according to price list No 14-01 and is determined by the equation:

$$T_w = T_{tf} + L, \qquad (4)$$

where T_{tf} is the tariff for a ton of freight (rubles), L is the loading and unloading operations (rubles).

The motor transportation of a ton of freight (T_m) is calculated according to price list No 13-01-01 and is determined by the equation:

$$T_m = T_{tf} + L + M_{td} + M_f, \qquad (5)$$

where M_{td} is the markups for delivery by dump truck or other vehicles of a ton of freight (rubles); M_f is the markups for the forwarding of a ton of freight.

With respect to the place of origin of the transportation costs all the expenditures on the delivery of construction materials from the manufacturing plants to the consuming industrial enterprises according to the technology of the transportation of freight can be subdivided into four groups: the costs for the transportation of the construction materials from the suppliers to the station (pier) of shipment; the costs for the transportation of the construction materials from the station (pier) of shipment to the station (pier) of destination; the costs at the station (pier) of destination; the costs for the delivery of the construction materials from the station (pier) of destination or directly from the warehouse of the manufacturing plant to the adjacent warehouses of the construction projects or the warehouses of the consuming industrial enterprises of these materials. Each of the indicated groups of transportation costs in their composition in turn is complex and therefore the procedure of their formation and calculation should be reflected in detail in the corresponding sectorial standard procedural document on the formation of the planned accounting prices.

All the expenditures on the delivery of construction materials from the suppliers to the users are determinined in conformity with the procedure stipulated by the current price lists. Thus, the fees for the delivery (removal) of empty (loaded) cars by railroad locomotive to the sidings are collected subject to the average daily number of delivered and removed cars and the distance of the delivery (removal) of cars in both directions according to the rates of Table 7 of price list No 10-01, "The Tariffs for Rail Freight Transportation."[1]

If the railroad siding, over which the delivery (removal) of cars for loading and unloading is carried out, belongs to the enterprises, the cost of transportation over it, in addition to the charges for the delivery (removal) of cars, also includes the expenditures connected with the maintenance of the railroad siding. When formulating the planned accounting prices the cost of the loading and unloading operations is determined for each ton-operation according to Table 10 of price list No 10-01, or in conformity with Section 6 of this price list.

The transportation expenditures on the delivery of materials from the suppliers to the warehouse at the project should be determined on the basis of the optimum patterns and conditions of the transportation of the materials with allowance made for the actual distances and the possible decrease of the transfers.

A network of the distances, which characterize the conditions of the delivery of freight from the suppliers to the delivery terminals, should be entered on the transportation diagram. The total distance should be the sum of the individual distances between the transfer points with allowance made for their number.

The transportation costs are calculated per ton of hauled freight, and then a calculation of the specific transportation expenditures per unit of output, which is stipulated in the price list (m^3, thousands of items and so on), is made. For this the sum of the individual values of all the types of transportation expenditures per ton is multiplied by the weight of a unit of output in tons. This recalculation in formalized form can be expressed by the following equation:

---

1. "Tarifnoye rukovodstvo 1 Ministerstva putey soobshcheniy SSSR" /Tariff Manual 1 of the USSR Ministry of Railways/.

$$T_o = (T_r + T_w + T_m) \cdot W, \tag{6}$$

where T_o is the proportion of the transportation expenditures per ton of output, which is stipulated by the price list (rubles); W is the weight of a unit of output, which is stipulated by the price list (tons).

The markups of supply and marketing organizations are included in the planned accounting prices as one of the components of the transportation and procurement costs. These markups are calculated as a specific percentage of the value of the materials and items being delivered in wholesale prices.

With the delivery of the same material by several supply and marketing organizations, which have different amounts of the markups, the weighted average markup is calculated for the formation of the planned accounting price for this material. Its calculation is made on the basis of the level of the markups and the proportion of the delivery of this material by each supply and marketing organization by the following equation:

$$M_{wa} = \frac{\sum M_i \times D_i}{\sum D_i}, \tag{7}$$

where M_{wa} is the weighted average amount of the markup (percent); M_i is the amount of the markup for supply and marketing organization i; D_i is the amount of the delivery of material by supply and marketing organization i.

Procurement and warehousing costs are the final component of the planned accounting prices of the materials and items used in road construction. They are included in the planned accounting costs as a percentage of the value of the materials being used in wholesale prices. The percentage ratio of the procurement and warehousing costs to the value of the materials and items being used is established on the basis of the planned amount of these costs and the plan of deliveries of materials in wholesale prices.

One of the advantages of the detailed planned accounting prices for construction parts and components is the fact that their substantiated individual structural elements serve as a unique criterion when estimating the individual items of the estimated expenditures and the actual data according to the bills of suppliers, transportation organizations and so forth.

In this role the planned accounting prices make it possible to identify the place and cause of the deviations from the standard level of prices and to take prompt steps to eliminate the negative deviations.

The use of planned accounting prices ensures the proper reflection of the results of the direct activity of each cost accounting unit.

COPYRIGHT: Izdatel'stvo "Radyans'ka Ukraina", "Ekonomika Sovetskoy Ukrainy", 1981

7807
CSO: 1820/152

PAVLODAR-EKIBASTUZ COMPLEX (TPK) EXAMINED IN DEPTH

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 2, Feb 81 pp 17-34

[Unattributed report of conference held in Pavlodar on: "The Pavlodar-Ekibastuz Complex: Development Problems"; date of conference is unknown]

[Text] The Draft of the CPSU Central Committee to the 26th Congress "Basic Directions in the Economic and Social Development of the USSR for 1981-1985 and for the Period Up to 1990" states: "To accelerate an increase in the economic potential of the eastern regions. To carry out major projects related to the tapping of their natural resources and to the development of fuel and energy supplies in Siberia and Kazakhstan. To concentrate here the construction of energy-intensive types of production.... To provide the further development of territorial-production complexes [TPK], particularly in the newly developed regions."

In Kazakhstan one of the most significant and rapidly developing complexes is the Pavlodar-Ekibastuz TPK. Suffice it to say that the volume of sales for industrial products here is annually rising at almost double the rate of the national average, and this region at present is responsible for almost one-tenth of the total volume of the gross product of republic industry.

The very rich supplies of fuel and energy resources serves as the basis for the formation and development of the Pavlodar-Ekibastuz TPK. The Ekibastuz and Maykubenskiy coal basins located here, in terms of reserves and the economic effectiveness of their exploitation, are among the most promising in the nation.

The coal and oil refining industries, power production, ferrous and nonferrous metallurgy and machine building are the specialization sectors which determine the place and role of this complex in the Union and republic division of labor. Over the long run these industries will develop successfully.

On the eve of the publishing of the Draft of the Basic Directions in Pavlodar a scientific-practical conference was held devoted to the problems of the formation and development of the Pavlodar-Ekibastuz TPK. The conference was organized by the Kazakh Gosplan, the Kazakh Academy of Sciences and the Kazakh Scientific-Technical Society.

Below we publish a report on the work of the conference.

In the Main Area

At the plenary session, the director of the NIEIPiN [?Scientific Research Economics Institute for Planning and Norm Setting] under the Kazakh Gosplan, Doctor of Economic Sciences E. A. Turkebayev, told about the basic development areas of the productive forces at the Pavlodar-Ekibastuz TPK.

The planning and organizing of large TPK realize one of the forms for improving the territorial organization of production, the speaker stressed.

Due to the creation and organization of the complex, a whole series of important tasks has been carried out in economic planning. There is a deeper coordination of long-range and current planning for the development of the productive forces as well as the creation and formation of large centers for industrial production.

The largest TPK attract attention throughout the nation and this creates favorable conditions for the accelerated solution of the economic and social problems related to their development. In the TPK, specialized production is widely developed and this is of long-term significance for the all-round development of the national economy. A relationship and development proportions are established between the leading specialized sectors. A complex of an infrastructure which services them is created. It is easier to solve the problems of providing labor resources as well as other questions of a universal acceleration of the formation of the complex and a rise in the effectiveness of its work.

A visible example of this is the Pavlodar-Ekibastuz TPK which includes Pavlodarskiy, Yermakovskiy, Ekibastuzskiy, Bayanaul'skiy and Uspenskiy administrative rayons.

The area of the complex is 57,400 km^2, or 46 percent of the territory of Pavlodarskaya Oblast. Here are located major industrial centers such as the cities of Pavlodar, Yermak and Ekibastuz and the urban-type settlements of Bayanaul, Maykain, Bozshakol', Leninskiy, Kalkaman, Tavolzhan, Shiderty and Shoptykol'. The population of the TPK on 1 January 1979 was 558,000 persons, or 69 percent of the oblast's inhabitants.

The basis of development for the TPK is the Ekibastuz Coal Basin which has brought the Pavlodar-Ekibastuz TPK up onto the same level as such major economic giants as the Western Siberian and Angara-Yenisey TPK. The place of this coal basin in the nation's economy can be seen from such comparative indicators as: Ekibastuz produces one-fifth of the strip-mined coal tonnage and during the years of the Tenth Five-Year Plan it provided one-third the tonnage of the increase in coal mining in the open pit mines of the nation. The coals here possess high economic indicators. Thus, according to the data of the design organizations and the statistical services, at the power plants fired with Ekibastuz coal, the cost of electric power is 3-5-fold cheaper than at those operating on Donets, Kuznetsk and Moscow coals. The mining of 1 ton of Ekibastuz coals presently costs a little more than 1 ruble and over the long run will decline to 40-50 kopecks.

Presently operating on Ekibastuz coals are 19 power plants of Kazakhstan, Western Siberia and the Urals with a total capacity of over 10 million kilowatts. This is double the capacity of the Bratsk GES and 15-fold more than Dneproges [Dnepr GES].

These plants generate as much electric power as was produced by all the Kazakh power plants in 1967. By 1990, the capacity of the four Ekibastuz GRES will surpass the capacity of all the present power plants in the republic while all the plants in the nation fired by coals from the basin will produce 2.7-fold more energy than was produced by the USSR in 1940.

Also impressive is the scale of power transmission line construction. Over the last 10 years, 16,000 km of power transmission lines were built carrying current from Ekibastuz to the regions of Kazakhstan. In the not-distant future, for the first time in world practice, the Ekibastuz--Center line will be built with a capacity of 1,500 kilovolts and a length of 2,415 km.

It has been estimated that the annual savings from the building of the Ekibastuz GRES and the transmission of electric power to the regions of Kazakhstan, the Urals and the Center of the European USSR will exceed 100 million rubles.

Machine building, metallurgical and petrochemical complexes are the other important components of the Pavlodar-Ekibastuz TPK. The TPK presently produces as many tractors as were produced by the entire nation in 1937, while their total power is only slightly less than the power of all the tractors produced in the nation in 1950. As a whole the machine building complex of the TPK even now in cost terms produces as much product as was produced by the republic machine building industry in 1960.

The organization of high-powered tractor production of the K-701 type and caterpillar tractors of the DT-75M made at the Pavlodar Tractor Plant imeni V. I. Lenin Association will make it possible not only to substantially replace the tractor fleet but also lower the total number of plowing tractors needed by republic agriculture.

The use of high-powered tractors will reduce by 40 percent the requirement for tractor operators and will provide an opportunity to save approximately 700,000 tons of metal a year. In addition, the bringing of the manufacturing of high-powered tractors closer to the areas of their mass use will provide a substantial savings.

The ferroalloy industry is developing rapidly. The Yermak Ferroalloy Plant which is part of the TPK, in terms of the production scale, is in third place among the analogous enterprises of the nation. It is also among the leaders in terms of the technical level of production.

The completion of the large Pavlodar Oil Refinery built according to the last word of engineering during the Tenth Five-Year Plan has been a significant step in the formation of the TPK.

Under the present development conditions of the national economy, the speaker continued, the most important features of the formation of the Pavlodar-Ekibastuz TPK are related to the solving of many new major scientific and technical problems. Among them are those such as: accelerating the growth rate of the coal industry in the nation and as a result the growth rate of electric power, the creation of the world's first high-power systems for transmitting direct and alternating current, increasing the complete use of raw materials and effective cooperation and the coordinated development of the region's infrastructures.

The creation of the Pavlodar-Ekibastuz TPK solves many other questions related to an effective rise in the productive forces of the adjacent regions of the nation.

The present industrial potential of Pavlodarskaya Oblast equals the industrial potential of the republic on 1 January 1960. Production here is particularly capital intensive, basically due to the metallurgical, chemical and petrochemical and machine building industries. As for the sectors of the fuel and energy complex, at present they are less capital intensive than in the republic as a whole. Thus, in 1975, the return on each ruble of fixed capital in the electric power of the TPK was 10 percent higher than the republic average while in the future here this will exceed the republic average indicator by more than 2-fold. In the coal industry even now the return on capital surpasses the republic average indicator by 3-fold.

The economy of the TPK is developing at a rapid pace. During the years of the Tenth Five-Year Plan alone, here the volume of industrial production increased by more than 1.5-fold in comparison with 1.2-fold for the republic as a whole. The growth rate for the production of industrial product in the TPK has outstripped the republic average indicator by more than 2.5-fold. This has been possible due to the enormous scale of capital construction in the region. One has merely to give such figures. Over the last 10 years, over 4.1 billion rubles of capital investments have been used. This is significantly more than was invested in the Kazakh economy in 1920-1950.

The general line in the development of the Pavlodar-Ekibastuz TPK in the immediate future will be a further strengthening of its specialization in the Union and republic division of labor. The formation of very large inter- and intrasectorial complexes is to be continued in the areas of fuel-energy, energy-metallurgical, petrochemical and machine building.

The fuel and energy complex will be the basis for the formation of the Pavlodar-Ekibastuz TPK and the leading specialized sectors will develop on this basis. In the not-distant future the Ekibastuz fuel and energy complex will become one of the largest in the world. Characteristically, the energy ties of the TPK will change in the future. While at present up to 60 percent of the coal is sent to the RSFSR, 20 percent goes to different oblasts of Kazakhstan and only 20 percent is consumed on the spot, by 1990, the proportional amount of deliveries outside the republic will drop to 23 percent, while the share of consumption inside the TPK will rise to 40 percent. This will make it possible to substantially increase the national economic return and reduce transport shipments. There will also be a change in the scheme for transmitting electric power to the central regions of the nation, to the Urals and to Western Siberia.

An important problem is the creation of a major petrochemical complex in the region on the basis of the Western Siberian oil. The development plans for the Pavlodar Oil Refinery contain a close production tie with the petrochemical and microbiological industries. In particular, they will take a significant amount of raw materials. In 1981-1985, the construction of the oil refinery will be basically completed. This will open up broad opportunities for further deepening the process of oil refining with the production of petrochemical products and protein-vitamin concentrates, that is, the organizing of a major technologically linked complex of intersectorial significance.

In the immediate future there are plans to build the first stage of a plant for protein-vitamin concentrates and start construction on the first stage of the Pavlodar Petrochemical Complex.

There will be further development of the energy and metallurgical complex which is represented by ferrous and nonferrous metallurgy.

The future development of the Yermak Ferroalloy Plant is determined by the presence of a dependable raw material source in the republic. Kazakhstan has around 95 percent of the reserves of the nation's chromite ores, while the proportional amount of the republic in the national production of chromium-based alloys is less than 35 percent. The quartzites of the Tekturmasskoye deposit can also be used as raw materials. On the basis of these raw materials, in the future the Yermak Plant should be highly efficient in producing both a broad range of traditional alloys as well as compound alloys.

The Pavlodar-Ekibastuz TPK is located in the best region for the development of the aluminum industry. Here there are all the necessary prerequisites for building a complex to produce alumina, metallic aluminum and rolled products. Here the chief factors are the sufficient raw material sources, the resources of electric power and oil coke (the Pavlodar Oil Refinery), construction capacity and so forth.

According to approximate estimates of the Institute for Geological Sciences under the Kazakh Academy of Sciences, with the combined processing of the Yesil' nepheline ores with the Turgay bauxites, the cost of the obtained alumina will be significantly lower than at the Achinsk Plant which uses nephelines from the Kyya-Chaltyrskoye deposit (Krasnoyarskiy Kray) or at the Volkhov and Razdan (Armenia) plants which also operate on nepheline raw materials.

In using the nepheline ores, there is no need to employ the scarce and costly soda products. In addition to alumina, it is possible to obtain cement costing 2-fold less than at the specialized enterprises of the cement industry. In this production metallic sodium, potassium, gallium, slag cotton, technical glass and so forth are obtained and the raw material base for the republic's aluminum industry is significantly expanded.

Of indisputable interest is the possibility of using the ash from the Ekibastuz power plants and the slag of the Karmetkombinat [Karaganda Metallurgical Combine], and this, along with broadening the raw material base for alumina production, will help to successfully solve the problems of protecting the environment.

Planning Considering All Factors

At the plenary session, the section head of the NIEIPiN under the Kazakh Gosplan, Doctor of Geographic Sciences B. Ya. Dvoskin, devoted his report to the urgent problem of planning the TPK.

He, in particular, pointed out that an analysis of the formation and development of the TPK of Kazakhstan indicates that the group, integrated placement of industrial enterprises reduces capital investments and operating expenditures by from 10 to 20 percent, the number of personnel is reduced by from 15 to 30 percent, up to 30 percent of the territory is saved, while product costs decline from 15 to 30 percent.

Economic efficiency is increased if one TPK combines complementary enterprises which are technologically interrelated. Precisely this brings to the forefront the problem of planning the TPK. The problem is to view them as an independent object of national economic planning and to work out a methodology, forms and the indicators of the TPK plan in coordination and cooperation with the planning of other regions (oblasts, republics and economic regions).

As is known, the speaker emphasized, the drawing up of integrated territorial plans makes it possible to coordinate the work of the various ministries and departments on a territorial basis, to view the national economy not only on an oblast breakdown but also on a sectorial breakdown and to correctly solve the entire aggregate of problems related to the development and location of the economy on the region's territory. This makes it possible to disclose additional reserves and opportunities for increasing product output, to raise the efficient use of fixed capital and production capacity, capital investments and labor resources and to eliminate parallelism.

Even during the first years of socialist construction, V. I. Lenin, in emphasizing the importance of comprehensive national economic planning, wrote of the need "for the exemplary positioning of a small 'whole,' but precisely a 'whole,' that is, not an economy, not a sector of the economy, not an enterprise but rather a total of all economic relationships and the total of all economic turnover even of a small locality." [V. I. Lenin, "Complete Collected Works," Vol 43, p 234]. These instructions of V. I. Lenin are particularly pertinent now. In particular, they apply directly to the planning of TPK.

Of primary significance is the elaboration of the plan indicators for the TPK. It is perfectly apparent that the plan of a TPK cannot and should not duplicate the indicators for the plan of economic and social development in a republic or oblast. Rather it should be a limited number of indicators which express the essence and content of the complex.

Recently the USSR Gosplan sent out to the Union republic gosplans 11 forms for working out a TPK plan. These included: commodity (gross) industrial product in comparable prices and rates on 1 January 1975, as a total for the sectors with the isolating of the basic enterprises; the production of industrial product in physical units broken down for the ministries and departments; the completion of production capacity from the expansion of existing enterprises and the building of new ones and the increase in capacity from the reconstruction of operating enterprises; capital investments and construction-installation work; the titles of the carryover production-end construction projects; the list of newly commenced construction projects; the number of employees; the construction of sociocultural projects; geological prospecting.

In our opinion, the listed forms do not fully meet the requirements of a comprehensive TPK development plan. For them, as was already pointed out, it is very important to establish the effective intra- and intersectorial general economic and production-technological ties. For this reason the TPK plans must have the corresponding forms and indicators which describe such ties.

Furthermore, the development of the TPK should ensure optimum intra- and intersectorial production proportions with the most effective specialization of the economy in the social territorial division of labor. From this it follows that the TPK plans must also make provision for the corresponding forms and indicators which would reflect these data.

B. Ya. Dvoskin recommended that as calculated indicators for the TPK they work out balances for the production and consumption of the basic types of industrial and agricultural product, for labor resources, mineral raw materials, water management, building materials and fuel and energy.

The speaker proposed that the required quantity of labor, material and financial resources allocated for the specific projects of the TPK be set apart as a whole for the TPK.

In our view, he emphasized, it is advisable to use as the basis the following model for the long-range TPK development plan.

1. The summary general economic indicators and growth rates for production and capital investments; the structural changes in the economy and the conformity of them to the planned development; the economic effectiveness of the complex as a whole.

2. The development of the material production sectors:

a) Indicators for the development of the economic sectors of nation-wide specialization which are closely tied to the carrying out general state quotas (industrial and agricultural product for the sectors of nation-wide specialization);

b) Indicators for the development of auxiliary and service production sectors the parameters of which are determined by the scale and development pace of the sectors of nation-wide specialization (the products of industry, agriculture and other sectors of material production having regional and local significance);

c) The indicators for the development of the production sectors designed to service the public (the production of products used by the public).

3. The development of the nonproduction sphere:

a) The availability of housing, utility-domestic and sociocultural services.

4. The amount of involved national economic resources of intra- and interregional significance, including:

a) The volumes of state capital investments going into the creation of new production capacity and nonproduction projects as well as the list of national economic projects proposed for construction, expansion and reconstruction;

b) The necessary additional material resources for the rapid development of the production complex;

c) The involved labor resources for ensuring the plan development of the production and nonproduction complex.

Thus, for the integrated development of the TPK it is essential to provide the interrelated and balanced functioning of the three groups of national economic sectors: specialization, the production infrastructure and the nonproduction sphere. In each TPK it is essential to create a more harmonious economic structure and have the accelerated development of the servicing groups along with the specialization sectors.

For example, let us take the Pavlodar-Ekibastuz TPK. At present, the specialization sectors comprising the basic nucleus of the complex and determining its place and role in the Union and republic division of labor are responsible for up to 80 percent of the gross product, around 90 percent of the value of the industrial-production capital and over 60 percent of the number of TPK industrial-production personnel.

The remaining sectors of industry such as metalworking, lumber and woodworking, the building materials industry, the light and food industries, as well as construction, transportation and so forth, comprise the production infrastructure which must ensure the development of the specialization sectors and the needs of the entire economy.

Finally, the nonproduction sphere includes the housing and utility system, trade, public dining, cultural, educational and medical institutions, administrative and managerial organizations, the consumer service system and so forth.

The planning of a TPK should ensure the efficient placement of the productive forces in each complex. It is a question primarily of the development of industrial centers also in the small- and medium-sized towns. Industrial centers are inseparable component parts of the TPK and for this reason, in planning the TPK, it is important to provide the correct apportionment of the industrial centers and define their development within the TPK system.

The experience of the formation and construction of industrial centers in Kazakhstan and the other republics shows the high effectiveness of the group placement of industrial enterprises, the cooperating on projects for the production infrastructure and the creation of common auxiliary and ancillary services.

In 1963-1978, the institutes KazpromstroyNIIproyekt [Kazakh Scientific Research and Design Institute for Industrial Construction] (Alma-Ata) and Promstroyproyekt [Design Institute for Industrial Construction] (Karaganda) worked out 27 general plans for Kazakh industrial centers. As part of the 16 approved ones there were 151 enterprises with an estimated cost of over 2 billion rubles, including 153 million rubles for common-center projects. On 1 January 1979, the implementing of proposals for 5 centers was completed, including for the Northern Ekibastuz.

The following data show the effectiveness of building industrial centers. The proportional savings of capital investments for just the 5 industrial centers was 6 million rubles, the savings of rolled metals was over 1,000 tons, over 4,000 tons for cement and 3,380 m^3 of lumber.

According to the scheme of the general plan for the Pavlodar Industrial Center, the realization of the design proposals will make it possible to reduce construction costs by scores of millions of rubles, to reduce operating expenditures by 150,000 rubles a year as well as substantially curtail the number of workers. For the Northern Ekibastuz Center, the savings of capital investments with the grouped placement of enterprises will reach 12.5 percent of the total estimated cost of the construction-installation work according to the initial scheme.

However, as a whole the construction of industrial centers in the republic is still not carried out on a proper level, as many ministries and departments change the approved dates for building departmental enterprises, they refuse to perform the functions of the head builders for the common-center projects and transfer the necessary funds to them, and do not provide the common-center projects with the required amount of design and estimate specifications. This leads to unsound temporary solutions, to unjustified expenditures and the failure to meet the date for putting capacity into operation.

As a result, at present only around 5 percent of the capital investments from the average annual volume of industrial construction in the republic goes for the building of enterprises which have been grouped into industrial centers, that is, a little more than 130 million rubles a year. And the economic effect from their construction is still the lowest in the nation. This is 0.85 percent of the estimated value while in Belorussia in the building of industrial centers this effect equals 4 percent, in Uzbekistan it is 2.7 percent, and as a whole for the USSR 1.9 percent. The situation is also bad in the forming of industrial centers. While over the last 14 years 43 schemes for the general plans of industrial centers were approved in Belorussia, in Kazakhstan the figure was only 16. The savings in operating expenditures of the common-center projects in the republic is 17.5 percent below the Union average.

It is essential to ensure a further improvement in the planning, designing and building of the industrial centers and to promptly solve the questions of the turning over of the proportional capital investments to the common-center projects, the allocating of capital investments by the ministries and departments according to the normed times for the building of the enterprises and the turning over of production equipment to the head builders. All of this will make it possible to increase the economic effectiveness of forming the industrial centers and hence the TPK as a whole.

An analysis of the placement of industrial production in the republic indicates that the present economic development stage is characterized by the highest concentration of industrial enterprises in the oblast centers and other large settlements. The oblast centers are responsible for 80 percent of the gross product, 65 percent of the fixed capital and 78 percent of the industrial-production personnel of all industry, while the small- and medium-sized cities are responsible, respectively, for 20, 35 and 22 percent.

The nature of the cities and workers settlements has a great impact on the employment of labor resources in social production. Thus, in the large- and medium-sized cities of Northern Kazakhstan which includes the Pavlodar-Ekibastuz TPK, for every 1,000 persons of the population, 9 persons are not employed in social production, in the small cities (with a population of 25,000-30,000 persons) the figure is 10 persons, in very small ones (up to 25,000 persons) it is 11, and in the urban-type settlements, 17 persons.

To involve this population in social production it is essential to move more boldly toward the creation of affiliates and shops of large plants and factories as well as small specialized enterprises in the small and medium cities and in addition develop in every possible way the local industry and consumer services.

However, in working out the schemes for the development and placement of the industrial sectors, a number of ministries and departments have shown a tendency toward excessive concentration of the industrial enterprises in large cities such as Ust'-Kamenogorsk, Pavlodar, Karaganda and so forth. At the same time this creates tension in the labor balance in these cities and complicates the economic situation in them. The planning bodies must in every possible way restrain this tendency and not permit excessive concentration of industrial enterprises in the individual cities.

The elaboration of specific long-range programs for the formation and development of the TPK is an important area for improving planning and management in them. The latter, Ye. V. Gvozdev emphasized, is viewed by us as an organic component of the state economic and social development plans. The long-range programs for TPK development should have a strictly specific nature and be a directive and address document determining the corresponding quotas and measures and interrelated in terms of resources, executors and times of realization.

Each TPK development program should include the following basic sections:

1) A specific goal-oriented section containing a formulation of the problem, its end and intermediate goals, subgoals and tasks, a description of the initial level of the state of the problem, the end results and the dates for realizing them;

2) A sectorial section containing a complete list of the quotas for the ministries and departments as well as limits on the various types of resources to be allocated to carry out these quotas;

3) A territorial section which contains a complete list of quotas to ensure the economic and social development of the TPK;

4) An organizational section which defines the forms, methods and procedure for managing and organizing the execution of the program as well as control over its implementation and the necessary organizational and economic measures.

The elaboration of the program should be carried out in several versions which differ in the ways, means, times and effectiveness for achieving the set goals.

The territorial program for the development of the TPK, along with solving the basic specific tasks, should make provision for:

1) The development of construction and power facilities, transportation and so forth;

2) The development of the social infrastructure (housing, children's institutions, schools, sociocultural projects, medical facilities and so forth);

3) The effective use of labor and material resources;

4) The rational use of natural resources and environmental conservation;

5) The territorial organization of the economy and settlement.

The program must ensure coordination of the types of production and the synchronized completion of the interrelated projects, optimum proportions in the development of production and the production and social infrastructure, the volumes of capital construction and the capacity of construction facilities as well as the prompt preparation of design and estimate specifications.

In our view, the presence of the accumulated materials, the degree of study and the national economic importance of the TPK--all of this makes it possible to propose the need to work out the republic's first long-range specific program for the development of the Pavlodar-Ekibastuz TPK for the period up to the year 2000 and to begin this work starting in 1981.

For the Sake of Environmental Conservation

The conference devoted great attention to conservation problems in the Pavlodar-Ekibastuz TPK. This question was the subject of a report given by the Vice President of the Kazakh Academy of Sciences and Academician of the Kazakh Academy of Sciences, Ye. V. Gvozdev.

He, in particular, pointed out that the questions of environmental conservation and the rational use of natural resources have never been of such concern as they are in our nation. Precisely from this position and from this standard we should approach a solution to the problems related to tapping the natural riches of the Pavlodar-Ekibastuz TPK, the speaker emphasized.

The creation of the very large Ekibastuz Fuel and Power Complex [ETEK] entails the solving of a number of complicated conservation problems. Let us examine them in more detail.

In removing the overburden in the coal strip mines large amounts of unusable rock are formed and these are stored in dumps. Here several questions arise: in the first place what and how much of use is contained in these dumps, how to extract the valuable components from them, when could this be done and, secondly, how to reclaim and recultivate the land occupied by the dumps.

The primary task of the production workers is to make provision ahead of time in the designs and plans for the necessary recultivation of the destroyed lands. The job for the botanists and soil scientists, hydrogeologists and geologists is to work out recommendations on the most acceptable, rational and cheapest recultivation of the destroyed territories. Much in this area is already being done. For example, the institutes of soil science and botany are working on the problem of using the dumps for the planting of brush and trees. The USSR State Committee for

Science and Technology has allocated some funds for this research and they, it must be assumed, will be repaid a hundred-fold in the future.

An important factor in the rational use of the territories of strip mines is the preliminary removal of the fertile soil layer with its subsequent use for recultivation. Unfortunately, as yet much is said about this but little is done.

From the standpoint of conservation, the speaker went on, the integrated use of the mineral raw material resources of the Ekibastuz Coal Basin is of great significance. More than 60 scientific research and design institutes are at work on solving this problem. The results of their research convincingly affirm the possibility for the industrial processing of the rock from the inner overburden, the concentration tails and the ash from the burning of the coal. Scientific research on the integrated use of the waste products from the fuel and energy complex must be carried out on a more planned basis, Ye. V. Gvozdev stressed.

Strip mining of the Ekibastuz deposits leads to sharp changes in the natural environment not only in the coal mining regions. The territories adjacent to the mines will be polluted by the dust and gases from the mining enterprises and the hydrogeological conditions and the sanitary and hygiene state of the terrain will be disrupted. Unfortunately, as yet no one knows how this pollution will spread in coming years or how the vegetation and animal world will suffer from this. Scientists have the urgent task of carrying out the necessary research, providing for the negative consequences of such changes in nature and being able to prevent them.

In our nation enormous attention is given to preserving the purity of the air basin, the speaker said. One has merely to recall the recently approved law on the conservation of atmospheric air. Here, in particular, provision was made to set standards for the maximum possible release of pollutants into the atmosphere. This certainly increases the responsibility of enterprise leaders for maintaining the purity of the air basin.

In line with the rapid development of Ekibastuz, the capacity of the municipal TETs is being intensely increased. At the same time this increase is being carried out without any fundamental solution to the problem of protecting atmospheric air. Even now the atmosphere in the region of the apartment buildings located on the southwest side of the TETs is heavily polluted with industrial wastes.

Kazminenergo [Kazakh Ministry of Power] and the VNIPIenergoprom [All-Union Scientific Research and Design Institute for the Power Industry] have not considered the demand of the oblast sanitation-epidemiological station on the need to reconstruct the existing ineffective ash traps, to install electric filters as well as increase the height of the smokestacks for the purposes of scattering the wastes. Such an approach to solving the problem of maintaining the purity of the air basin is in no way justified and it must not be repeated at the Ekibastuz GRES.

Considering the changeover to the bulk extraction of the Ekibastuz coals, these GRES are being designed to burn fuel with an ash content up to 55 percent. This means that around 200 tons of sulfur dioxide will be released in the air every hour and this would be sufficient to form 300 tons of sulfuric acid. In raining it can fall in unknown places and in an unknown concentration. One thing is clear. This will have a harmful impact on the plant world and, in particular, on the plantings of agricultural crops.

Methods as yet have not been developed for recovering the nitrous oxides and the possibility of suppressing their formation in burning the coals as yet has not been determined. Here obviously the scientists have much to do.

The putting of new power capacity into operation necessitates the protecting of the environment against thermal pollution. Experience shows that an exceeding of the temperature in the GRES cooling reservoirs by 8-10° C over the maximum natural one involves a permanent disruption in the biological processes and leads not to autopurification but rather autopollution of the water systems. In such bodies of water, as a rule, mass development of algae occurs and a so-called "blooming" of the water is noticed and this causes great economic harm. Other biological disturbances also appear.

The Zoology Institute of the Kazakh Academy of Sciences has started hydrobiological research on the cooling reservoirs of the GRES. The aim of this research is to ascertain the influence of thermal pollution on the hydrobiocenoses and to work out recommendations to eliminate the biological problems in using such bodies of water.

The results of research on the enclosed-type cooling reservoir of the Ekibastuz GRES-1 have shown that mass development of algae will occur in it. For combating the "blooming" of the water the Zoology Institute recommends the use of a biological method, namely, the raising of certain herbivorous fish in this body of water, and in particular the silver carp and the representative of Indian fauna, the "buffalo." These fish species to a significant degree are capable of suppressing algae development and tolerate rather well the conditions of the cooling reservoir. The existing feed supply of the lake can support the development of a commercial population of these fishes the food value of which is greater than the local forms.

In solving the conservation problems it is essential to pay attention, the speaker continued, to the landscaping of the cities, worker settlements and industrial installations and to the creation of shelter belts, natural parks and above all the Bayanaul. Our task is to protect the standards of the natural biocenoses for our offspring and for scientific purposes.

The development scale of the Pavlodar-Ekibastuz TPK poses difficult but fully resolvable problems in the area of combating environmental pollution, the disrupting of the ecological equilibrium in the region and the deterioration of sanitary and hygiene conditions in the locality. The most essential shortcoming in the use of nature is the sectorial, narrow departmental approach to solving a number of important questions. For this reason we feel that the planning bodies, together with the concerned ministries and departments, must work out a territorial comprehensive scheme for the protection of nature which would guarantee the rational use of the fuel-energy, raw material, water, land and other natural resources and make it possible for the planning and management bodies to coordinate the sectorial TPK plans in accord with the demands of environmental conservation.

The Main Element--The ETEK

In March 1977, the CPSU Central Committee and the USSR Council of Ministers approved the Decree "On the Development of the Ekibastuz Fuel and Energy Complex [ETEK] and the Construction of the DC Power Transmission Line with a Voltage of 1,500 Kilovolts between Ekibastuz and the Center." This document provides that the volume of coal mining at the Ekibastuz and Maykubenskiy deposits will rise up to 170 million tons a year as well as for the construction of five power plants (four in the region of Ekibastuz and one on the western shore of Lake Balkhash) each with a capacity of 4 million kilowatts.

The prospects and problems in the development of the ETEK were thoroughly discussed by the conference participants.

The energy of Ekibastuz will have a substantial impact on improving the nation's fuel and power balance. The formation of the ETEK will be of particularly important significance for Kazakhstan. This was described in his report by the head of the Laboratory for Fuel Supply of Thermal Power Plants of the KazNIIenergetiki [Kazakh Scientific Research Institute for Power Production] under the USSR Minenergo [Ministry of Power and Electrification], T. S. Sartayev.

At present the thermal power plants in the republic, he pointed out, operate on Ekibastuz, Kuuchekinskiy, Kuznetsk and Karaganda coals (basically on the wastes of coal beneficiation) as well as on Central Asian natural gas and mazut. In the future, the mining volumes for power coals at the Karaganda Basin and at the Kuuchekinskiy Deposit will not undergo marked growth. The Maykubenskiy coals are better used chiefly as a graded fuel. Natural gas and mazut will be allocated for newly built power plants only in exceptional instances.

Thus, over the long run the basic source of power fuel for the republic's thermal power plants will be the coals of the Ekibastuz Deposit which are, incidentally, among the most economic coals mined in the eastern regions of the nation.

Many thermal power plants of Kazakhstan, the Urals and Western Siberia operate on Ekibastuz coals. In our republic their consumption comprises 61 percent, in the Urals it is 33-34 percent and in Western Siberia 5-6 percent.

The balance reserves of coal in Ekibastuz are sufficient for mining over a period of 70-80 years.

The operating mines of "Severnyy" and "Bogatyr'" as well as "Vostochnyy" and "Maykubenskiy" which are under construction have been included as part of the ETEK for supplying fuel for power plants with a total capacity of 36-38 million kilowatts.

In 1979, the Ekibastuz Basin mined 59.2 million tons of energy fuel, and in 1980, 70 million tons. The use of highly productive equipment makes it possible to achieve such high growth rates for the mining volume. The operating mines of Ekibastuz are the most highly mechanized mining enterprises in the sector. Suffice it to say that one ERShRD-5000 rotary excavator in terms of productivity surpasses the most modern mine. At present the Ekibastuz miners have 18 rotary and 98 clamshell excavators, 57 electric locomotives, 128 bulldozers and much other equipment. Such high technical equipping makes it possible to mine coal very efficiently. As a whole for the Ekibastuzugol' [Ekibastuz Coal] Association, the cost of a ton of fuel in 1979 was 1.37 rubles while labor productivity for a worker was 941 tons a month. In 1980, output surpassed 1,000 tons a month.

At the same time, as was stressed in his report by the technical director of the Ekibastuzugol' Production Association, Candidate of Technical Sciences N. M. Belik, there are individual factors which have a negative influence on the further development of the basin. One of them is the lag in the amount of overburden stripping behind the plan and this has led to a decline in the parameters of the mines. The width of the sites has been reduced and the slope angles have risen. Ultimately this can lead to a decline in the growth rate of coal mining and to a deterioration of the technical and economic indicators for the association.

The basic reason for the lag in overburden stripping is the shortage of transport for hauling the rock. This factor is also joined by others, in particular, the absence at the association of facilities to repair transport equipment, the poor state of the railroad track and the chronic and rather significant lack of track workers. The plants of the USSR Ministry of Railroads promised help in repairing the traction units, but they did not keep their promise. At present, 43 electric locomotives at the Ekibastuzugol' Association need overhauling.

The development of the coal basin, N. M. Belik continued, has been substantially held back by the insufficient capacity of the construction facilities of the Ekibastuzshakhtostroy [Ekibastuz Mine Construction] Combine. Thus, in 1977-1979, the construction workers used only 67.2 percent of the capital investments.

Work has not been properly developed on building the "Vostochnyy" Mine as well as reconstructing the "Severnyy" Mine; the erection of the RGTO [?Repair on Mining Equipment] Plant has not been started.

The situation is also bad with the building of sociocultural and service projects. For example, only one-half the housing was built than was envisaged by the decree on the creation of the ETEK.

In order to carry out the increasing amounts of construction and installation work and coal mining in the 11th Five-Year Plan, it is essential to increase the number of personnel by 13,800 persons, including by 5,800 for the Ekibastuzugol' Association. For this 803,000 m^2 of housing are needed. For this reason it is essential to speed up the rate of housing construction.

The development of the coal basin can be impeded by interruptions in the fulfillment of quotas by a number of ministries. For example, at present it is clear that the first stage of the "Vostochnyy" Mine will not go into operation before December 1984 and the increase in output from this mine in 1985 will be 3-5 million tons instead of the previously planned 20 million tons. Up to now the question has not been settled of what sort of equipment--domestic or foreign--will be used at the enterprise.

Science and practice show that the most effective is a method of removing the overburden in stages of 20 m per transport level. With this there is a reduction in the current overburden coefficient and the number of transport levels, and hence, operating expenditures are reduced. At the same time at the Ekibastuz mines it is impossible to safely work the overburden benches if their height exceeds the digging height of an excavator (for our machines this is 12-14.5 m). For this reason on the basis of the serially produced EKG-12.5 excavator it is essential to develop a model having parameters of 20 m for the digging height and a bucket capacity of 10 m^3. Such a proposal has been forwarded to the USSR Minugleprom [Ministry of Coal Industry].

In conclusion, N. M. Belik emphasized that the present situation in the basin requires a comprehensive solution to all the problems of the ETEK. Power capacity must be developed considering the real opportunities for coal development. And for this, the speaker was convinced, there must be a single coordinating organization, for example, a permanent commission on the problems of the ETEK consisting of representatives from the USSR Gosplan, all the ministries involved in the creation of the complex and the USSR State Committee on Science and Technology.

At the conference it was pointed out that a serious shortcoming is the incomplete use of Ekibastuz coal. Its selective extraction is carried out for the purpose of reducing the average ash content of the fuel sent to the power plants. Such a practive leads to significant losses. Thus, each year 3-4 million tons of fuel with a combustion heat of 3,100 kilocalories per kg are sent to the dumps.

The losses can be eliminated only by converting to bulk extraction. The bulk mining of coal and the construction of blanding-loading complexes will make it possible to increase the coal reserves in the basin suitable for extraction by more than 5 billion tons, to increase the productivity of the mining and transport equipment by 10-15 percent and the labor of a worker by 30 percent as well as substantially increase the mining volume of energy fuel.

Also not overlooked was the fact that bulk coal mining also tells on its quality. This problem, as was pointed out in the report by Candidate of Technical Sciences R. I. Ridel' (Karagandagiproshakht [Karaganda Design Institute for Mines]), is directly related to the particular features of the geological structure of the basin's coal seams as well as to the methods of working them.

The worked seams 1, 2 and 3 have significant thickness: the first is 24 m, the second is 40 m and the third is 110 m. These seams have a complex structure with frequent intercalations of carbonaceous and slightly carbonaceous rock. The range of the change in the thickness of the layers is from several centimeters to 4-6 m, and the range of the change of the coal and the rock in the layers is from 12 to 80 m.

Considering the particular features of the seam structure and the parameters of the coal mining equipment, bulk mining methods are regulated by the conditions approved in 1979 for estimating and working the coal reserves instead of the conditions in effect in the basin since 1960 with selective fuel extraction by clamshell excavators. The new conditions to be put into effect in 1983 provide for the separate working of the coal intervals (complexes) with a minimum thickness of 4 m and a maximum ash content of 60 percent and rock intervals (complexes) with a thickness of 4 m and an ash content over 60 percent.

The research of our institute has shown that the average coal ash content for the basin will rise from 38.4 percent with selective extraction up to 43.3 with bulk mining. For this reason, according to the State Standard accepted in 1979, the Ekibastuz coal, after conversion to bulk mining, should be separated into two quality groups. The first group is coal with an average lower specific combustion heat of 4,150 kilocalories per kg and this corresponds to an ash content of 39.1 and 39.9 percent with an effective moisture content of 7 and 6 percent. Here the ash content in an individual batch (train) can be up to 44 percent and in a single car up to 47 percent.

The second group is coal with an average lower specific combustion heat of 3,450 kilocalories per kg and this corresponds to an ash content of 47.6 and 48.3 percent with the same effective moisture content. Here the maximum ash content in an individual batch can be up to 53 percent and in individual cars up to 55 percent.

For reducing the maximum ash content, it is essential to build blending-loading complexes. The technical plans already exist. Their realization depends upon the prompt solution to a number of questions. The main ones are: equipping production with highly productive equipment for the blending storage dumps, with devices for operational control over coal quality in the faces and on the surface and with devices ensuring the functioning of the quality control system.

Engr M. A. Vider (KNIUI [Karaganda Scientific Research Coal Institute]) gave a report on the question of improving norm setting and determining the quality indicators of coal in the Ekibastuz Basin. He pointed out that with a rise in the volume of coal mining in the basin, contradictions have also increased between the requirements of the standards on coal quality, the methods of sampling and the acceptance rules, on the one hand, and the possibilities of the basin, on the other. A new approach has been needed to the questions of quality. All the problems related to this have been solved by the institute of the coal industry and power with direct participation of the Ekibastuzugol' Production Association.

It was shown that the most effective would be a changeover to bulk mining of all seams with the use of lower-ash coal at the power plants of the Urals and Western Siberia and higher-ash coal at the power plants located in the region of Ekibastuz. The conclusion of the scientists was reflected in the well-known decree of the party and the government to create the ETEK. This document contains a point which speaks of the need to work out a standard for the coals of the basin used for powdered combustion considering the selective mining up to 1983 and, beginning with 1983, considering the bulk mining of all seams.

In carrying out this assignment, the KNIUI and the UralVTI [Urals Affiliate of the All-Union Order of the Red Banner Thermal Engineering Institute], together with the Ekibastuzugol' Association, and under the methodological leadership of the USSR Gosstandart [State Committee for Standards], the USSR Minugleprom and the USSR Minenergo, set a range of quality indicators and the optimum values of these indicators from the national economic viewpoint and they worked out new methods for determining them and acceptance rules which would consider the particular features, scale and concentration of mining and use of coal from the Ekibastuz Basin.

The conference also reviewed the problems of operating power equipment using Ekibastuz fuel.

The operating thermal power plants of Kazakhstan, the director of the Yermak GRES, A. P. Mokshin, and the engineer of the republic specialized production enterprise Kazenergonaladka [Kazakh Power Regulation], A.I. Dakhov, pointed out in their comments, are supplied with fuel by the Ekibastuzugol' Association with significant deviations from the standards. According to the data of the power plants, they receive an average of around 15 percent, and in individual periods up to 30 percent, of the fuel in pieces of 300 mm and more in size. The specific combustion heat of certain batches of coal is less than 3,400 kilocalories per kg while the maximum ash content is 50-60 percent with an acceptable one of not more than 47 percent.

Operations with such fuel cause many difficulties in the equipment of the fuel-transport shops of the power plants. The mechanisms for crushing the large pieces break down, the conveyor belts break, car stoppages are increased in unloading operations and so forth. A great deal of money is spent on equipment repairs. Thus, according to far from complete data, in 1979, around 40,000 rubles were spent for these purposes at the Petropavlovsk TETs-2.

A. I. Dakhov emphasized that even boiler units of modern power plants (the Yermak GRES and others) are unable to operate dependably on coal with an ash content of 47 percent, let alone on fuel with the deviations found in the standards of group II. Due to the burning of poor quality fuel, the shortfall of electric power in 1979 was at the Petropavlovsk TETs-2 and Karaganda GRES-2, respectively, $96 \cdot 10^6$ kilowatt hours and $20 \cdot 10^6$ kilowatt hours, at the Yermak GRES for the second half of the same year it was $17\text{-}18 \cdot 10^6$ kilowatt hours, and at the Karaganda GRES-1 during the fourth quarter the figure was $1.876 \cdot 10^6$ kilowatt hours and so forth.

For ensuring dependable operation of the boilers on low-quality coal, it is essential to reconstruct the coal pulverizing equipment, the burners, the convection heating surfaces, the gas flues and certain other assemblies considering the requirements of the present-day standards.

In describing the experience of starting up power units with 500-megawatt capacity using Ekibastuz coal, Candidate of Technical Sciences S. I. Kazarinov (UralVTI) pointed out that over the last 10 years several modifications have been developed for boilers, turbines and generators. With the appearance of the new modifications of equipment, the power units become more dependable and economic and most importantly better adapted for operating on high-ash bulk-mined coal than their predecessors. This makes it possible in the future to increase the power resources of the Ekibastuz Coal Basin by 35 percent.

Doctor of Technical Sciences, Prof B. P. Ustimenko told about the search for new optimum systems and designs of combustion chambers for Ekibastuz coals being carried out at KazNIIenergetiki. At present the institute is studying polyhedron circular, cyclone and fluidized bed combustion chambers. An improvement in the burners will make it possible to more effectively use Ekibastuz coals in thermal power plants.

Scientists from a number of other scientific research and design organizations in the republic and the nation are also at work on solving this problem.

It is essential to accelerate the development and introduction of more advanced methods for crushing the coal, for reducing abrasive wear on the boiler units, methods for reducing harmful wastes in the flue gases and effluents and means for increasing the stability and reliability of the operation of the unified power system of Northern Kazakhstan considering the development of the ETEK.

For Waste-Free Production Methods

With the creation of the ETEK, the problem of utilizing the wastes from the mining and burning of Ekibastuz coal assumes important national economic and socioeconomic significance. Scores of scientific research and design institutes, various ministries and departments as well as associations and enterprises of the republic and nation are engaged in the search for technical solutions to this problem.

Two areas of research have been defined. The first is the use of the large amount of ash from the Ekibastuz GRES as a raw material for the aluminum industry. The second is the use of the waste products from the mining and burning of the coals for producing building materials.

These areas were widely discussed at the section which reviewed the problems of the rational utilization of mineral and raw material resources.

As was pointed out, as a whole for the Ekibastuz Coal Basin, the reserves of alumina-containing rock run into the billions of tons. With full-capacity coal mining by 1990, each year 13.3 million tons of internal overburden rock will be produced and this contains 20-25 percent aluminum oxide. Moreover, in burning the fuel at the four Ekibastuz GRES, each year around 28 million tons of ash and slag will be transported to the dumps, and this also contains a significant amount of alumina raw material. All these waste products should be used in the aluminum industry and in other sectors.

In accord with the research program on this problem, said Candidate of Technical Sciences S. A. Shcherban (KazPTI [Kazakh Design and Engineering Institute]), the All-Union Aluminum and Magnesium Institute (VAMI) in 1971 compiled a technical and economic report on the advisability of processing the ash from the Ekibastuz coals into alumina, cement and other products. Calculations showed that this ash in terms of quality is inferior to the bauxite, nepheline and alunite alumina-containing raw materials presently in use or proposed for use. However, over the long run, under the conditions of the decline in the supply of high-quality bauxites for the aluminum industry, they can become a very important source for the production of alumina.

Among the merits of the ash one must mention the fact that, in being a dump and finely pulverized product, the ash (in contrast to the bauxites and nephelines) does not require capital investments and operating expenditures on prospecting, mining, crushing and milling. The cost of the ash is basically determined by the expenditures on transporting from the themal power plants to the alumina plant. At the same time, due to the high silica content in the ash, expenditures on industrial processing are significantly increased. Thus, the production of just one commodity product, alumina, on the basis of the ash does not provide production profitability. Precisely this was the mistake of the technical and economic report of the VAMI. It determined the economic effectiveness of processing the Ekibastuz ash solely in relation to alumina and did not consider the output of other side products (cement, sodium metasilicate and others), although in terms of weight and value, the production of the latter is commeasurable or surpasses alumina production. For example, in relating the capital investments against the alumina and sodium metasilicate, with a ratio for their output of 1:2.4 by weight and 1:0.83 by value, the amount of the proportional capital investments is reduced by 2-fold. In a word, high economic effectiveness can be achieved under the condition of the integrated processing of the ash and the production of many types of products including cement, sodium metasilicate and others.

In using the ash as a compound raw material, it is important to find an optimum method for its processing. Such a method has been worked out by the scientists from the KazPTI, VAMI and Giprotsement [All-Union State Design and Scientific Research Institute for the Cement Industry]. It has been successfully tested at various experimental plants. The new method is technologically efficient and can be carried out on standard equipment used in the alumina and chemical industries.

Research on working out rational production systems for the use of the ash is being conducted at the Institute for Metallurgy and Concentration under the Kazakh Academy of Sciences. The difficulty is to find an efficient method for concentrating the ash. The problem is that here the barrier is the high (up to 60 percent) silica content in it. The institute has tested a method for alkali chemical concentration whereby the silica is partially removed. This method makes it possible to fully utilize all the valuable components of the raw material and further processing of the concentrated product (the concentrate) no longer represents any technical difficulty and can be carried out by the widely-known method of high-temperature sintering with limestone or by hydrochemical processing.

A significant contribution to research on the possible use of ash for producing building materials has been made by scientists from the Alma-Ata institute NIIstromproyekt [Scientific Research and Design Institute for Building Materials] under the USSR Minpromstroymaterialov [Ministry of Building Materials Industry], said the director of this institute, the academician of the Kazakh Academy of Sciences S. T. Suleymenov at the conference. He pointed out that the technical possibility and economic effectiveness have been shown for producing a mixed cement-ash binder and on its basis a composite reinforced concrete, the production of ash aggloporite and unfired gravel, ash-ceramic products tentatively called "zolokeram" [ash-ceramic] and other materials.

As is known, over 60 percent of the ash from the Ekibastuz coals has an increased content of unburned residue. This impedes their use in cement and concrete production. At the same time, the presence of carbon in the raw material can satisfy the demand for fuel while the mineral part of the ash can replace clay raw materials. This has brought about the use of ash in the production of fired wall materials, particularly as in many oblasts of the republic there are no clays suitable for obtaining high-grade brick.

The production method developed by the Alma-Ata institute NIIstromproyekt for fundamentally new wall ash-ceramic products makes it possible to use a charge with an ash content up to 85 percent. Results of experiments have shown that this production method provides an opportunity to produce products with high physicomechanical properties.

The production of ash-ceramic products can be organized on the basis of the modern standard equipment of brick enterprises. Here, in comparison with brick production using a local natural raw material (from the coal contained in the ash), there is no need to introduce fuel into the composition of the charge and this makes it possible to reduce fuel consumption by 100 kg per 1,000 standard brick units and to cut the length of drying the raw material in half.

The feasibility studies of the institute have established the possibility and advisability of building enterprises producing wall products of the "zolokeram" type in Pavlodarskaya Oblast. As is known, this oblast, like the entire republic as a whole, has an acute shortage of wall materials. The first plant producing "zolokeram" on the basis of ash from the thermal power plants is to be built in the city of Yermak.

In describing the prospects for the use of the ash-slag wastes, S. T. Suleymenov touched on a number of problems related to the complete processing of the ash from the Ekibastuz coals.

Previously it was felt, he said, that the hydraulic removal of the ash from the thermal power plants was more economic than the dry method. In practice, the former method is basically used. However, the use of the hydraulically removed ash in the building materials industry entails a number of difficulties and in many instances is economically disadvantageous in comparison with the use of the natural raw material. The problem is that the natural separation of the ash and slag slurry in the dumps leads to a very heterogeneous ash composition and necessitates blending. The quality of the ash is also worsened by the discharging of industrial wastes and the wastes of chemical cleaning of the boilers onto the dumps. All of this makes it it difficult to obtain high-grade building materials.

In order to make the ash competitive with a natural raw material and to interest consumers in its use, it is essential to dispatch the ash to the building industry enterprises in a dry form and at the minimum possible price or gratis, as well as work out a system of economic incentives for the waste-forming and waste-processing enterprises.

In conclusion, S. T. Suleymenov emphasized that the volume of ash consumption by the ceramic industry does not solve the global problem of fully utilizing the enormous wastes from the Ekibastuz industrial center. For putting these wastes into the raw material balance it is essential to work out a uniform and complete feasibility study with the providing of specific recommendations on the areas of the processing and use of the ash.

The building materials enterprises must be allocated resources of the primary raw material after the full utilization of the wastes (if the technical possibility and economic advisability of their use have been established). It is essential to plan the processing of the ash like the production of the product from the natural raw material.

In addition to the ash, the Ekibastuz industrial center has accumulated an enormous amount of coal mining wastes. These are the rock from the layer above the coal (the external overburden) as well as the intraseam rock (the inner overburden). All this waste is stored in dumps which now occupy an area of 3,414 hectares. During the time of operating the basin, the dumps have accumulated 900 million m^3 of rock, including 120 million m^3 of coal wastes (inner overburden). With the use of permanent coal qualities and the changeover to bulk mining in the basin there has been a sharp decline in the dispatching of coal wastes to the dumps. Thus, all the usable components of the inner overburden, in leaving the combustion chambers of the thermal power plants go to the ash dumps. Above we have described how the ash can be fully reprocessed.

At the same time, as was emphasized in a speech at the conference by the chief geologist of the Ekibastuzugol' Production Association, K. A. Aytkaliyev, of great interest is the research on using the inner overburden rock for a raw material in the building materials industry. The amount of this rock is constantly growing and by 1990 will reach 155 million m^3 a year.

Preliminary research on the rock from the stratum over the coal in the basin carried out by the Pavlodar Industrial Institute and the Belgorod Technical Institute has established the possibility of obtaining portland cement of the 350 and 500 grades from the rock. Unfortunately, the research covered only a portion of the thickness of the stratum over the coal now being worked. It must be assumed that this gap will be filled in by the research being conducted by the Moscow Fossil Fuel Institute, the Pavlodar Industrial Institute, the Karagandaugleravedka [Karaganda Coal Exploration] Expedition and the Ekibastuzugol' Association.

The Corresponding Member of the Kazakh Academy of Sciences U. A. Ayapov devoted his report to the problems of producing refractory and binding materials on the basis of the waste products from the industry of the Pavlodar-Ekibastuz TPK. He emphasized that the most promising areas for the recovery of these wastes are the integrated use of the ash from the thermal power plants, the overburden and the waste products from coal beneficiation; the use of the hematite from the Pavlodar Aluminum Plant for producing silicate concrete and brick as well as an additive for the ash-ceramic materials; the use of the slag from the Yermak Ferroalloy Plant in producing carbonization-hardening refractories and concretes; the obtaining of local binders on the basis of all waste products; the use of ash as a microfiller and for conventional refractory and silicate concretes.

In order to achieve the rational use of the mineral raw material resources it is essential to accelerate the carrying out of the necessary scientific research, design and experimental work.

New Goals--New Searches

With the accelerated development rate of the Pavlodar-Ekibastuz TPK, ever-new problems arise and the solution to them must be worked on at present, as was stated by the conference participants in the section which discussed the questions of the development of the region's industry, construction and transportation.

Among the most important problems, as was pointed out in the report of the Chief Engineer of the Pavlodar Aluminum Plant, F. B. Alykov there are the problems of increasing alumina production, raising the complete utilization of the bauxites, accelerating the construction rate at the Bozshakol' Mining and Concentration Combine on the basis of the copper and molybdenum deposit of the same name as well as the creation of electrolysis production at our plant and the development of the ore supply of the Maykainzoloto [Maykain Gold] Ore Administration.

The Pavlodar Aluminum Plant for the first time in Soviet and world practice has developed and introduced on a major scale a highly efficient scheme for obtaining alumina from the high-silica and high-iron bauxites of Kazakhstan. Thus, an important national economic problem has been solved, that is, the putting into production of the low-grade bauxites the reserves of which are enormous in our country.

For the creation and development of the new method for processing the low-grade bauxites a group of workers from the plant and scientific organizations in 1980 received the USSR State Prize.

The unique mineralogical and chemical composition of the employed low-grade bauxites, the fundamental newness of the equipment and production process and the use of new equipment with great unit capacity necessitated additional studies and a significant improvement both in the individual equipment assemblies and the production conversions as a whole.

The technical and economic indicators of the enterprise have been significantly improved. Beginning in 1968, the plant has operated profitably and the profit volume has been rising year by year.

The successes in the question of developing the new production method, raising the complete utilization of the raw material and improving product quality and production efficiency were possible due to the creative cooperation of the plant with the scientific research and design institutes. However, we are confronted by even more complicated and responsible tasks, the speaker emphasized. The limited bauxite reserves of the Turgay Ore Administration requires the tapping of new deposits in Kazakhstan for the production sphere. These include, first of all, the bauxites of the Krasnooktyabr'skiy Ore Administration which differ substantially from the standard ore in the presence of organic impurities and carbonates. During the 11th Five-Year Plan the share of such bauxites will be 50 percent.

The conversion of production to these raw materials necessitates the reconstruction of virtually all the plant's systems. Construction and installation work alone worth 20.6 million rubles is to be carried out. The main task is to mobilize the entire collective of the enterprise to rapidly master the new production methods without a drop in the achieved quality of the alumina or a decline in production capacity.

We must also develop the production methods for obtaining vanadium pentoxide and reach designed capacity; together with Giredmet [State Scientific Research and Design Institute for the Rare Metals Industry], to provide the production of gallium 99.9999 instead of 99.9997 and gallium oxide.

One of the important questions in the integrated use of raw materials is the organizing of waste-free production. The research conducted by the institutes Giprotsement, NIISTOproyekt [expansion unknown], the IFKhIMS [Institute for the Physicochemical Testing of Materials] and by the Laboratory for Laying Materials at the Leninogorsk Polymetallic Combine has shown that the existing dump slurries are a good raw material for producing cement and other binding materials for walling up the worked space in mining. At present the full use of the dump slurry is being planned.

In addition a method has been worked out for obtaining fluoride salts for producing cryolite and aluminum sulfate.

The carrying out of the planned measures both to expand the raw material supplies of the plant and to increase the complete use of the raw material will make it possible to significantly increase production efficiency and will create a basis for its further improvement.

The Pavlodar Aluminum Plant will have great prospects with the completion of the electrolytic production of metallic aluminum. However, the construction program for this production has been held up due to insufficient financing. Thus, in 1981, the preliminary targets planned 6 million rubles but only 2 million rubles were allocated. We have asked the Kazmintsvetmet [Kazakh Ministry of Nonferrous Metallurgy] and the USSR Mintsvetmet [Ministry of Nonferrous Metallurgy] to settle this question once and for all.

Ferrous metallurgy in the TPK, F. B. Alykov continued, is represented not only by our plant. A few words about the Bozshakol' copper-molybdenum deposit and the mining and concentration combine [GOK] being built on its base.

The deposit is rather large with the shallow stratification of the ores suitable for strip mining. Here in the future one-quarter of the copper ore tonnage in Kazakhstan will be mined.

Construction of the GOK started in the second half of 1976. Unfortunately, up to the present the work rate at this important project has been low. The annual use of capital investments does not exceed 2.5 million rubles. It appears that the construction of the combine can be drawn out for many years.

For the Maykainzoloto Ore Administration a strengthening of the ore supply is an immediate problem.

In talking about the prospects for the development of ferroalloy production in Kazakhstan, the chief of the Economic Section of Giprostal' [State Institute for the Designing of Steel Enterprises] (Khar'kov), Yu. M. Alekseyev, commented that a major role has been assigned to the Yermak Ferroalloy Plant. On the order of 120 million rubles are to be allocated for its expansion and reconstruction in the 11th Five-Year Plan. At the same time, at present this enterprise is experiencing major difficulties and is operating unstably. The problem is that the plant has organizational problems and it is supplied with poor quality charge materials. The designed capacity of shop No 1 has only been 63 percent reached (the last furnace was completed in 1978).

The USSR Minchermet [Ministry of Ferrous Metallurgy] should help the Yermak Ferroalloy Plant in more correctly rectifying the situation which has developed.

In 1984-1987, at the enterprise a smelting shop complex should be built for producing high-quality manganese alloys. In order to ensure the prompt completion of this production, it is essential to accelerate work on developing the manganese ore deposits in Central Kazakhstan. The creation of raw material supplies for producing manganese alloys in Kazakhstan will make it possible to solve the problem of supplying ferroalloys to the metallurgical enterprises in the eastern regions of the nation. However, as yet there still is particular concern over the lag in the scientific research studies on the concentration systems and the method of smelting alloys from these ores.

The Pavlodar-Ekibastuz TPK has a number of economic prerequisites for the further development of machine building and metalworking. The Pavlodar Tractor Plant imeni V. I. Lenin Production Association serves as the main basis for forming the machine building complex.

In the speech of the General Secretary of the CPSU Central Committee, Comrade L. I. Brezhnev, at the October (1980) Plenum of the CPSU Central Committee, serious criticism was directed against the tractor builders. "In the new five-year plan, it is essential, it is simply necessary," emphasized Comrade L. I. Brezhnev, "to create and begin producing a row tractor and a grain combine which in terms of their specifications would meet the highest modern requirements. This would make it possible to take a major step ahead in raising agricultural efficiency."

In his speech, the deputy director of this association V. G. Voronin took up the problems of organizing the production of K-701 type wheeled tractors. The association must carry out a large amount of work to develop additional capacity. Thus, the calculated volume of capital investments for implementing the basic construction program at the Pavlodar Tractor Plant during the 11th Five-Year Plan is 350 million rubles and the volume of construction-installation work is 184 million.

During the 12th Five-Year Plan the plant should reach designed capacity. According to the data of Giprotraktorsel'khozmash [State Design Institute for Tractors and Agricultural Machinery] under the USSR Ministry of Agricultural Machine Building, 550 million rubles of capital investments will be needed for this.

For producing the K-701 tractors, it is essential to increase the size of the collective by an additional 16,000-17,000 men, and this means to build 1,107,000 m^2 of housing. However, the feasibility study envisages the construction of 180,000 m^2. Many important sociocultural and service facilities were not considered at all in the institute's plans. For example, there are no facilities for the municipal economy, trade, culture, education, public health, sports and consumer services and the approximate value of these exceeds 100 million rubles.

In conclusion V. G. Voronin said:

"Attention to man and to the development of housing construction and sociocultural projects is not just tribute to passing fashion but rather a natural process caused by the entire course of development of our nation. We feel that these questions should not be overlooked in the long-range plan for the development of the Pavlodar-Ekibastuz TPK of which our plant is a part."

The Pavlodar Oil Refinery is the youngest enterprise in the region. It produced its first products in 1978. In January 1979, production capacity was reached here ahead of time. Comrade L. I. Brezhnev congratulated the participants in the construction and developing of capacity for this remarkable labor victory.

The chief of the Technical and Economics Section of VNIPIneft' [All-Union Scientific Research and Design Institute for the Oil Refining and Petrochemical Industry] (Moscow), I. V. Prostova, and certain other speakers talked about the problems of the development of the petrochemical industry in the Pavlodar-Ekibastuz TPK.

According to the indicators for comparative economic efficiency, this region is the most favorable for locating the production of organic synthesis products. Here there are plans to build a large petrochemical complex.

However, proceeding from the existing capacity of the construction organizations engaged in building the oil refinery, it is clear that the erection of such a complex must be deferred to the distant future. Certainly it is a question of using over 800 million rubles of capital investments.

A delay in the time for commencing construction on the petrochemical complex and, consequently, the time of its completion is economically unjustified. For this reason it is advisable to increase the capacity of the construction organizations so as to begin erecting the important petrochemical projects in the 12th Five-Year Plan.

The role of construction in forming the Pavlodar-Ekibastuz TPK is exceptionally great. It not only lays the basis for the future production infrastructure but at the same time is one of its active parts.

The chief of Glavpavlodarstroy [Main Pavlodar Construction Administration] B. A. Veselov, the graduate student of the SOPS [Council for the Study of the Productive Forces] under the USSR Gosplan, A. I. Durova, the deputy manager for economics of the Ekibastuzenergostroy [Ekibastuz Energy Construction] Trust G. M. Shapovalov and others pointed out that construction in the complex is developing rapidly. Thus, the volume of construction-installation work during the Tenth Five-Year Plan rose by 24 percent in comparison with the Ninth while fixed productive capital of the sector increased by 75 percent.

At the same time, the conference participants pointed to substantial shortcomings in the work of those who are building the complex. Labor productivity is growing slowly among the construction workers, and during the period from 1975 through 1979 it did not increase at all. The return on capital is declining. While in 1975 this was 2.49 rubles, in 1979 it was just 2.2 rubles. Some 40 percent of the construction organizations at present are not profitable at all.

The basic factors which impede a rise in the efficiency of this sector lie in the scattering of construction and its industrial base over various ministries and departments, in the low level of construction concentration and in the scattering of capital investments over numerous projects.

Over 130 organizations from 25 ministries and departments are engaged in construction in the region. The average capacity of each of them is just 2.3 million rubles of construction-installation work per year. The small organizations under different departments create meager production facilities which are unable to carry out the tasks of industrial construction.

The way out of the existing situation is to improve the management of construction and to raise the level of its concentration. These tasks can be carried out in two ways. The first is to create a territorial construction association as part of the Kazakh Ministry of Heavy Construction. The second is to form a coordinating body under the Pavlodarskaya Oblast Executive Committee with broader powers to manage construction than those which it presently possesses.

The solving of the problem by the first method will provide a significant economic effect. The unification of construction in the region into a unified system will make it possible to have deeper specialization of the construction organizations and the building materials enterprises and to raise the level of cooperation by creating consolidated specialized trusts. With the existing management structure, 82 million rubles of capital investments would be needed for achieving the required capacity of the construction organizations by 1986. But if an association were created, by the more efficient use of the existing fixed capital the expenditures could be reduced to 66 million rubles.

The centralizing of management for the building materials enterprises will provide a significant savings of capital investments. For example, it has been estimated that merely by creating a production association for prefabricated reinforced concrete it would be possible to reduce capital investments in the 11th Five-Year Plan by 7-8 million rubles.

In solving the problem by the first way a real opportunity will arise to reduce the number of workers employed in auxiliary and ancillary production as well as engineers and technicians in management. There will be a more rapid rise in labor productivity for the basic workers.

The centralizing of construction will make it possible to significantly reduce (from 15 to 25 percent) the working capital and to more freely manipulate the financial and material resources. The elimination of departmental barriers will serve the cause of creating a unified and modern material and technical base in the region. This will provide the smoother and better supply of materials and structural elements for the construction sites.

The second way of forming a coordinating body for construction is less effective. However even it would play a positive role as it would permit construction in a more efficient manner and would raise the level of construction planning in the TPK.

The conference participants voiced the opinion that an improvement in construction management would be a major step ahead in carrying out the party and government Decree "On Improving Planning and Strengthening the Effect of the Economic Mechanism on Raising Production Efficiency and Work Quality." This document, in particular, envisages the conversion to a two- or three-tiered management system in 1979-1981.

As was pointed out at the conference, an indispensable condition for the normal development of the TPK productive forces is the strengthening and improving of the intra- and intercomplex transport and economic ties and the transportation of the region. At present the Pavlodar-Ekibastuz TPK has an active transport balance. The dispatch of freight surpasses by 2-fold the amount of incoming. The region has developed transport and economic ties with all oblasts of Kazakhstan and with many regions of the nation. Subsequently these ties will broaden.

At the same time each type of transport has its own range of unsolved problems. These were described in detail by the chief engineer of the Virgin Lands Railroad N. K. Isingarin, the chief of the Pavlodar River Port E. M. Stepuk, the group leader from Giprotranstei [State Institute for Technical and Economic Research and Designing of Rail Transport] of the Ministry of Railroads (Moscow) S. V. Prostorov, the head of the industrial-transport section of the Pavlodar Gorkom V. A. Chukov and others. Here are a few of the problems.

In the developing of rail transport, extensive use has been made of proportional participation of the sectorial ministries and departments. For example, at present there are more than 10 participating ministries in the Pavlodar-Ekibastuz TPK. At the same time the financial and material resources for developing the routes are not provided in sufficient amounts or on time. This leads to lamentable disproportions and prevents the normal operation of basic production. Thus, by the starting up of the first stage of the Pavlodar Oil Refinery, the production facilities of two stations--Pavlodar-Severnyy and Pavlodar-Port--were not finished and work had not been started on the station Neftezavodskaya. Moreover, here such major projects as the carwashing and steaming station and the oil line from the plant to the Pavlodar tank farm had been put in the category of secondary ones. They still have not settled the questions of transporting furnace mazut and liquified gas to the enterprises of the Pavlodar Industrial Center.

In recent years there has been a noticeable tendency to shift a portion of the rail freight to motor transport. However, the smallness and separateness of many motor vehicle enterprises prevents a rise in the effective use of the vehicle fleet of the TPK. At present out of the total number of motor vehicles in the region, more than 70 percent are under different departments. In many instances the equipment of the departmental motor pools is used inefficiently. Here labor productivity is 30-35 percent lower and average shipping costs are a third higher than in the public motor enterprises.

The centralizing of shipments and the concentrating of the vehicle fleet in large public motor pools will make it possible to reduce the unproductive expenditures.

The chief reserve for raising the efficient use of transport lies in improving the shipment structure and in a comprehensive approach to its development. At the same time, in the Pavlodar-Ekibastuz TPK, as was pointed out at the conference, up to now a general scheme has not been worked out for the development of the transport system. We must be concerned with creating such a scheme now so as to fully meet the needs for freight shipments in the Pavlodar-Ekibastuz TPK tomorrow.

A Crucial Condition for Development

A large range of questions was discussed at the section devoted to the urgent problems of socioeconomic development in the Pavlodar-Ekibastuz TPK. In particular, it was a question of the procedural bases for planning the intersectorial proportions, for improving the internal placement of the TPK productive forces, the planning and forecasting of development in the nonproduction sphere and building children's preschool institutions, schools and sociocultural and service projects.

In examining the questions of the effectiveness of comprehensive development, the chief of the Section for Territorial Planning and the Placement of the Productive Forces under the Kazakh Gosplan, Candidate of Economic Sciences K. B. Isentayev pointed out that in 1981-1990, labor productivity should increase by 1.5-fold as a whole for the TPK industry.

The effectiveness of capital investments into the development of the complex and particularly into its specialized sectors will be rather high. The indicators for the comparative effectiveness of capital investments has calculated as the ratio of capital investments per unit of increase of commodity product in the TPK to the analogous average republic indicator are: 0.7 in 1981-1985 in electric power, 1.2 in the oil refining industry, 0.45 in the coal industry, 0.80 in ferrous metallurgy, 0.22 in nonferrous metallurgy and 1.0 in machine building.

Major problems are being solved and must be solved for the purpose of increasing the economic efficiency of TPK industry. In electric power, for reducing the construction [illegible] of the Ekibastuz GRES, for reducing the consumption of materials and for reducing labor expenditures, progressive technical solutions will be employed. The introduction of them, according to the data of the Novosibirsk Teploelektroproyekt [Design Institute for Thermal Power Plants], will make it possible to reduce expenditures on building the power complex by approximately 160 million rubles. Just locating two GRES at one site in the region of Lake Shandaksar will make it possible to lower construction costs by 117 million rubles.

The saving in adjusted expenditures from the creation of the ETEK and the transmission of its energy to the Center and other regions of the nation have been determined by Energoset'proyekt [Design Institute for the Power Network] at 60 million rubles. The high efficiency of the Ekibastuz GRES is determined by the following factors: by the locating of the power plants close to the coal basin, by the possibility of transmitting a large quantity of electric power over DC power transmission lines with a voltage of 1,500 kilovolts to the European part of the nation and by the low coal mining costs. The first factor provides minimum expenditures on transporting the fuel and will make it possible to organize high-speed assembly-line construction of the power plants, the unified management of their operation and centralized repair services. The second factor excludes the transporting of fuel outside the region. The third speaks for itself.

Then K. B. Isentayev prescribed certain measures the realization of which would help to increase production efficiency both of the individual industrial sectors as well as the TPK as a whole.

Along with the development of the specialization sectors, it is essential to provide an appropriate development level of the sectors which service the complex. Production efficiency to a greater degree depends on this.

The head of the laboratory of the SOPS under the USSR Gosplan M. V. Golubitskaya took up the system of calculations to establish the placement of production in the TPK.

The senior scientific coworker from the NIEIPiN under the Kazakh Gosplan L. V. Anikina devoted her speech to the problems of improving the economic structure and the intracomplex placement of the productive forces.

The conference dealt thoroughly with the problems of planning and forecasting the development of the nonproduction sphere of the TPK. The sector head of the NIEIPiN under the Kazakh Gosplan, Candidate of Economic Sciences Z. K. Kurbanova emphasized that the lag in the growth rate of the nonproduction sphere had become a restraining factor in the formation and development of the Pavlodar-Ekibastuz TPK. All the indicators characterizing this sphere are significantly below the republic average and the standard. For example, as of 1 January 1978, the available housing calculated per person here equaled 8.5 m^2 against 11 m^2 for the republic. The housing has a high percentage of wear (from 30 to 60 percent). The level of public amenities is low.

The situation is no better with consumer services. Thus, in 1978, the volume of domestic services calculated per resident was 20 rubles 75 kopecks for the region, while the republic average was 22-27 rubles and the standard was 26 rubles 89 kopecks.

In the given region, where major national economic tasks are being carried out, Z. K. Kurbanova emphasized, it is essential to pay particular attention to the nonproduction sphere. Certainly the effective development of the TPK economy is possible only in creating an adequate social infrastructure on its territory.

The pertinence of this thesis was reinforced by convincing examples which were given in the speeches of the deputy chairman of the Pavlodar Municipal Executive Committee G. I. Mogilevtsev, the chief of the Pavlodarskaya Oblast Administration for Domestic Services for the Public S. K. Kozhakhmetov, the chief of the Pavlodarskaya Oblast Public Health Department T. K. Kairbekov, the chief of the Pavlodarskaya Oblast Trade Administration M. S. Kapenov and others.

Here are a few figures. The supply of the population of Pavlodarskaya Oblast with retail trade enterprises is 90.8 percent, for public dining enterprises it is 44.2 percent and for vegetable and potato storage facilities 53.4 percent. The state of affairs is exacerbated by the fact that the capital investments allocated for the construction of these projects are not fully utilized. Thus, over the 4 years of the Tenth Five-Year Plan, the plan for using the funds was carried out by only 63.6 percent.

In the region the development level of public health is insufficient. Many major enterprises avoid this important area. For example, the Ekibastuzugol' Production Association, having built a 200-bed hospital in 1954, over the last 25 years has not invested a single ruble into the construction of public health projects, although the number of employees over this time has more than doubled. Such a fact does not bother the USSR Minugleprom.

The sociodomestic problems are interrelated with the problems of the supply and retention of personnel and raising their skills. The deputy chief of the Labor Section under the Pavlodarskaya Oblast Executive Committee A. K. Kishkembayev analyzed the use of labor resources in the oblast. He pointed out that, regardless of the increased population in the region and the great employment of it in the national economy, the need for working hands is rather acutely felt and around 16,000 men are lacking for the plan. The greatest manpower shortage is observed in agriculture.

The graduates from the general education schools, vocational-technical schools, technical schools and VUZes are the basic source for replenishing the labor resources. Tutorship plays an important role in retaining youth in production. The organizing of youth collectives has also provided positive results. In particular, this is confirmed by the experience of the Komsomol-youth brigades in the subdivisions of the Zhilstroy [Housing Construction] Trust and at the aluminum plant. At the same time, personnel turnover still remains high. Over the 4 years of the Tenth Five-Year Plan it has been 28.6 percent in industry, 32 percent in construction and 20 percent in agriculture. For completely supplying the complex with labor resources and retaining the personnel it is essential to create all of the necessary living conditions in the region.

The conference participants emphasized that even now it is essential to forecast the size of the TPK population over the distant future. This will help in correctly planning the development of all the TPK sectors.

The NIEIPiN under the Kazakh Gosplan has made certain calculations in forecasting the population growth of the Pavlodar-Ekibastuz TPK. Thus it is assumed that by 1990 the TPK population will increase by 47.4 percent in comparison with 1975; this contrasts with 32.8 percent for the oblast and 27.1 percent for the republic as a whole. It is also expected that in the general TPK population structure there will be significantly more young people than in the oblast. Undoubtedly the demographic trend should be considered in forecasting the development of the TPK.

In line with the growth of the urban population in the TPK, the problem of increasing the production of agricultural products becomes evermore acute and particularly for meat, milk, vegetables and potatoes. The academician of the VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], R. Yu. Kuvatov, devoted his report to the question of the development of agricultural production in the suburban zone. He pointed to the necessity of sharply increasing the agricultural production level in order to fully supply the population with food.

The prospects for agricultural development in the TPK have been outlined in the scheme for the development and placement of its sectors for 1981-1985 and for the period up to 1990. Here consideration has been given to the possibilities of the partial use of the industrial and construction base.

In the aim of bringing agriculture as close as possible to the needs of the region, at present additional studies are being carried out on clarifying the structure of crop and livestock raising and the times are being revised for solving this problem considering its accelerated realization.

Over the long run there are plans to expand the plantings of potatoes and vegetable and melon crops and, thus, fully satisfy the needs of the population for these types of products.

Grain production should be basically for feed uses. A certain portion of the grain will also be used as raw materials by the enterprises of the food, flour-milling, groat and combined feed industries.

One-half of the planted area of the TPK (both dry-farmed and irrigated) in the scheme has been allocated to feed crops. By 1985 this will make it possible to fully supply livestock raising with feed. By 1990, the sector will receive its full requirement of concentrated feeds. For this around 40 combined feed enterprises are to be put into operation.

Even now measures are being taken to intensify livestock raising, particularly dairy farming, commercial poultry raising and increasing meat production by new methods.

There are also plans to have a qualitative transformation of the physical plant of agriculture and primarily its technical base.

The discussion of agricultural development on the territory of the TPK was continued by the deputy director of the Virgin Lands Affiliate of the KazNIIEOSKh [Kazakh Scientific Research Institute for the Economics and Organization of Agriculture], Candidate of Economic Sciences G. M. Turmanbayev. He, in particular, took up the questions of improving the interaction of the sectors of agricultural production and trade.

Life has shown that separateness in the organization of production and trade leads to the creation of all sorts of receiving points on the farms. All of this leads to an increase in labor expenditures and costs and results in additional product losses.

These difficulties and contradictions can be resolved only by improving the ties between the production of the product and trade. It is essential that trade be not merely a transfer unit between the producer and the consumer but rather as equal a sector as agricultural production and industrial processing. That is, in each specific instance, it is a question of creating an agroindustrial association for the production, sale and processing of vegetables in the system of the Pavlodar-Ekibastuz TPK.

Also mentioned was the necessity of including (in addition to the specialized vegetable, potato and dairy farms in the suburban zone) the hothouse combines of the enterprises and organizations as part of such an association. These hothouse combines are presently under construction in Pavlodar, Yermak and Ekibastuz. They will cover significant areas of covered ground.

The deepening of production specialization and concentration and the development of interfarm cooperation on a basis of intrazonal division of labor will make it possible to create a compact suburban zone around Pavlodar, Ekibastuz and Yermak producing vegetables, potatoes, milk, meat and eggs. Thus, the problem will be solved of supplying the population of the large TPK with food.

Participating in the conference were the Deputy Chairman of the Kazakh Gosplan A. T. Sit'ko, the first secretary of the Pavlodarskaya Obkom B. V. Isayev, the chief specialist of the USSR Gosplan B. M. Izhin, other party and soviet workers, leaders of industrial enterprises and construction projects of Pavlodarskaya Oblast and scientists from the republic and nation.

Recommendations were adopted at the concluding plenary session.

COPYRIGHT: "Narodnoye khozyaystvo Kazakhstana", 1981

10272
CSO: 1820/140

FLAWS, ACHIEVEMENTS OF URAL AREA DEVELOPMENT REVIEWED

Sverdlovsk URAL in Russian No 1, Jan 81 pp 3-8

[Article by Doctor of Economic Sciences A. Demanev and Candidate of Economic Sciences V. Shipilov: "At the Turning Point of the Five-Year Plans"]

[Text] The old Urals have grown younger by another five-year plan. Scores of new industrial enterprises have been built, hundreds of plants have been reconstructed or modernized, the cities and villages have become more beautiful, and the material standard of living and culture of the people have substantially grown.

This is the case. But what has been said applies equally to the Urals and to the entire nation. But what have been the specific successes of the individual oblasts of the Ural Region and just what comprises the above-mentioned growth, modernization and the prerequisites for further successful development in the 11th Five-Year Plan? And what are the reasons which impede successful development? Let us deal with this in more detail and not fear figures for here they are not only to the point but essential.

In the Middle Urals during the 11th Five-Year Plan, the volume of industrial production rose by 14 percent and as if this were not a significant indicator, almost 100 percent of the increase in product output was obtained from a rise in labor productivity. Even greater growth of 18 percent was recorded in Chelyabinskaya Oblast. And here again the entire increase was due to the same factor. The industrial enterprises of Kurganskaya Oblast increased the volume of their production by one-third.

And thus for all the oblasts of the Greater Urals.

During the 5 years, the economic map of the region changed substantially. In Sverdlovskaya Oblast alone, more than 400 major national economic installations appeared. An unique complex, a broad-flange rolling mill, has gone into production, an oxygen converter shop at the NTMK [Nizhniy Tagil Metallurgical Combine] has been constructed and the third power unit of the Beloyarskiy Atomic Power Plant [AES] has been put into operation. Both the scale and the importance of these and many other construction projects are enormous. Each of the two power units at the Reftinskaya GRES put into operation during the first half of the five-year plan equaled the power of the first Dneproges [Dnepr Hydropower Plant]!

The rural workers of the Middle Urals increased the production of agricultural products by 26 percent.

The Perm' workers reported that they put into operation such important national economic installations as the ammonia and carbide units in Perm' and Berezniki, formalin production in Gubakha, the Perm' Synthetic Detergents Plant, the Aleksandrovsk poultry farm, the Berezniki dairy and many others.... The construction pace has been picking up at the Prem' GRES, a giant with a capacity of 4.8 million kilowatts. Its output will be 30 billion kilowatt hours, that is, almost double the amount presently produced by the entire system of Perm'energo [Perm' Power Administration]! In this manner a very serious problem for the Western Urals of an electric power shortage will be eliminated.

Udmurtia.... Only one-fifth of the republic's inhabitants are employed in industry. But machine building and metalworking, the leading industrial sectors, now produce 63 percent of the gross product of all the autonomous republic's industry, while this percentage is lower for the Urals. But not only are these sectors developing, as they say, at a steady pace, but also metallurgy, power, the petroleum and chemical industries. Some very indicative facts and figures for this republic. Udmurtia presently produces 11 percent of the nation's passenger cars, 35 percent of the motorcycles and over 50 percent of the sports and hunting guns. Oil production and the output of the food industry and woodworking are growing, while the average annual gross grain harvest and its yield have risen.

Or take the Orenburg Gas Complex which now is already world famous. With the completion of its third stage, the fuel industry of Orenburgskaya Oblast reached designed capacity for processing 45 billion m^3 of gas a year. Is this a lot or a little? Judge for yourselves. In 1960, the entire gas industry of the USSR produced this amount. As a total in the Orenburg area, more than 130 large projects and facilities were put into operation. Among them was the Kiyembayev Asbestos Combine which is a joint construction project of the CEMA countries. The seventh and eighth power units of the Iriklinskaya GRES and 24 new oil deposits were put into operation ahead of time. The Kamelik-Chaganskoye oil shale deposit was discovered and its reserves were estimated at 12 billion tons. This is a new, major potential base for the development of power, chemistry, building materials production and the other national economic sectors in the Western Orenburg Territorial Production Complex [TPK]. One other vivid fact: the power plants of Orenburgskaya Oblast at the turning point of the two five-year plans surpassed the capacity of all the plants in prerevolutionary Russia by more than 2-fold! And on the agricultural front, the Orenburgers have been in leading positions: grain production reached 8.2 million tons, while in the prewar years it was 1.5-2 million tons. At present there are around 4 tons of grain per year for every person in the oblast, and this means that not only are the grain requirements saitsfied for just the Orenburgers but also the neighbors gain a great deal. Thus a national division of labor is carried out.

The workers of the Transurals have also achieved major successes in agriculture. Kurganskaya Oblast which possesses one-sixth of all the planted area of the Urals and one-fifth of the area planted in wheat reached an annual average harvest of grain and pulse crops of 16.8 quintals per hectare. One-third of the meat, one-quarter of the animal oil, two-thirds of the machinery for livestock raising and the preparation of feed--this is the weighty contribution of the Kurgan workers to the production of the entire Ural Region.

A convenient territorial-geographic position, the unique mineral and raw material resources, the relatively developed transport and economic ties, the presence of powerful industrial potential and, finally, a highly developed network for training skilled workers, engineers and technicians as well as scientific research and design institutes--this is the foundation and highly promising potential with which the ural region, one of the leading economic regions of the nation, is entering the 11th Five-Year Plan.

As in the previous one, the 11th Five-Year Plan will pose the following main tasks for our region: to raise the efficiency of social production and provide a high level of intensive work for the basic production processes and proportional, balanced development of all the economic sectors and the entire economy.

For achieving this goal it is essential to solve a number of important national economic problems. One of them is to raise the level of the mechanization and automation of labor and production. This is a complicated and long-term process. The 11th Five-Year Plan is off to a good start with help from its predecessor.

For example, the Middle Urals will enter the new five-year plan already putting into operation 4,600 automatic, semiautomatic and special highly-productive machines and units, including 700 with numerical program control. At Uralmash [Urals Heavy Machine Building Plant], Uralkhimmash [Urals Chemical Machine Building Plant], Uralvagonzavod [Urals Railway Car Building Plant] and a number of other enterprises in Sverdlovskaya Oblast, plasma metalworking processes are being introduced and will be introduced. This will increase labor productivity by 2- or 3-fold.

This process is also being actively developed in the other oblasts of the region. Thus, in the Orenburg area the active part [machinery and equipment] of fixed capital rose by 1.3-fold, over 120 shops and sections were mechanized and around 700 automatic and flow lines were put into operation.

At the Kurgan enterprises over 600 automatic and mechanized flow lines were put into operation. Here there already are 500 fully mechanized and more than 100 automated shops and sections. The degree of labor mechanization has risen by 12 percent, and 35 percent of the equipment was replaced during the 5 years.

In Permskaya Oblast there now are 77 enterprises which have been fully mechanized and automated for basic production and more than 1,000 shops and sections. In the 11th Five-Year Plan 1,612 automatic and mechanized flow lines, over 1,500 machine tools with program control and 18 mechanical robots will already be operating. And the result already: over the 4½ years, the labor of 33,000 workers has been saved!

Even during the years of the Ninth Five-Year Plan, the Urals workers became the initiators of the most efficient use of capital investments by reconstructing production and intensifying existing equipment. However, the share of capital investments for these purposes in Urals industry is still just 25 percent. Yes, a great deal has been done. For example, in Sverdlovskaya Oblast, the Pervoural'sk New Pipe Plant and the Sinarskiy Pipe Plant, Uralkhimmash and a number of other enterprises were reconstructed. This made it possible to significantly increase the production volume and improve working conditions. But because of a number of historical conditions both in the Middle Urals and in the other oblasts of the region, there still are many old small enterprises with a high proportional amount of worn out and obsolete equipment and with an insufficient level of production automation and mechanization. These must either be reconstructed or closed down. But is it reasonable to do the latter if the product of many of these plants is essential to the nation? And here skilled persons are employed and tight collectives have formed. How should their future be defined? An example of the "way out of the situation" is the towns of Krasnotur'insk and Asbest. They are being developed in an integrated manner. A good deal is being done to solve a range of socioeconomic problems in Kamensk-Ural'skiy, Polevskoy and other towns. In the settlement of Novoutkinsk (the Iskra Plant), the ministry helped to carry out a program for socioeconomic development. For the inhabitants of the settlement, housing and service conditions were created, the plant is successfully being reequipped, an institute affiliate has been opened and an affiliate of an electrical engineering technical school is functioning. All of this has made it possible to retain skilled personnel.

Certain old plants should be turned into narrow-specialized enterprises, while at others, when the question is metallurgy, only the second and third conversions should be left or just one of them. As we can see, there are different reasonable ways for solving this problem.

There is still another variation of the problem. Due to the depleting of deposits or for other reasons individual types of production have "prospects of curtailment." In this instance how important it is to predetermine the ways to employ the collective and population of the settlements. New production has been promptly located in certain coal regions, and an affiliate of Uralmash will function in the settlement of Bulanash.

However, individual ministries are not settling these problems at the designated times. And this involves serious consequences.

As a whole, let us repeat, capital investments for reconstruction comprise an insignificant percentage. In a number of industrial sectors in the Urals, the degree of labor mechanization does not exceed 50 percent, and in auxiliary production is even lower. At many enterprises the reconstruction plans are being carried out slowly and are not being met. It is sad to say that at times this happens not at an old plant but even at such a giant as the flagship of Soviet metallurgy, the Magnitogorsk Combine [MMK]. A large portion of its fixed capital is obsolete and physically worn out. Although a decision was taken long ago to reconstruct the combine, the problems of the technical state of the MMK are urgent now. The discrepancy between the present technical condition of the MMK and many other metallurgical combines and modern needs and tasks is obvious. Here is apparent the old sickness of a gap or "distance" between the decisions and plans and their carrying out. (In the second February issue of the journal URAL, this problem will be examined specially in an article about the MMK.--Editors.)

An improvement in product quality is to remain in the 11th Five-Year Plan one of the most important tasks. The quality problem, as L. I. Brezhnev said in the Accountability Report to the 25th Party Congress, "encompasses all aspects of economic activities. High quality means the saving of labor and material resources, a rise in export opportunities and ultimately the better, fuller satisfaction of society's needs." The introduction of new equipment and production methods plays a substantial role in improving product quality and raising production efficiency.

A great deal has been done in the Urals in this area. In the Western Urals alone, over the 4.5 years of the past five-year plan, more than 2,000 new product types have been developed, including 108 which do not have domestic analogs and have been manufactured for the first time in the USSR. Some 1,295 products have been awarded the state Quality Mark.

Major measures to improve production and raise its technical level have been carried out in Kurganskaya Oblast. In recent years here they have developed 500 types of new machines, equipment, devices and instruments. The industry of the oblast presently produces 237 products with the honorific Quality Mark. The dependable Kurgan KAVZ-685 bus with good cross-country capability can be encountered in the Tyumen' North, on the routes of the BAM [Baykal-Amur Mainline] and at the construction projects at the Nonchernozem zone. The products of Kurgansel'mash [Kurgan Agricultural Machinery Plant] are famous not only in our nation but also abroad. With the aid of the UDS-3A universal milking rig produced by the plant, two persons under field conditions can milk 200 cows and also provide primary processing of the milk.

Over the 4 years of the Tenth Five-Year Plan, the use of new equipment produced by the Uralmash Production Association has saved the national economy around 300 million rubles. This has been the result of improving product quality, lightening the designs and improving the technical and operating parameters of the machinery and mechanisms. Uralmash has delivered several flow lines with a total length of over 4 km to the Nizhnedneprovskiy Pipe Rolling Plant. Due to heat treating, wheels on the lines are 15 percent stronger than the ordinary. Moreover, they last longer and in using them an opportunity is created to increase the carrying capacity of the railway cars by 7-8 percent and increase train speed. Another example. Over 10 million slabs a year--this is the total capacity of the continuous steel-casting units (UNRS) developed by the Uralmash workers for the Azovstal' [Azov Steel], Novolipetsk and Cherepovets metallurgical plants. In comparison with teeming, these units increase the output of ready product by 10-12 percent. As a total over the years of their operation, the nation has received more than a million tons of additional metal. But that is not all. Significantly less electric power is spent on each kilogram of steel billets obtained from the UNRS. In recent years, the Uralmash workers have substantially reduced the metal intensiveness of the units (that is, calculated per kilogram of product). In other words, they produce more product while less metal goes into their manufacture. The benefit, it can be said, is a dual one. Incidentally, the readers can be acquainted more closely with this remarkable development of the Uralmash designers. The world's first radial-type UNRS which marked the beginning to a fundamentally new direction in heavy machine building has been described in the essay of Yu. Yarovoy "The Price of Priority" which was published in the journal URAL, No 1 for 1977.

A third example. The Krasnoyarskugol' [Krasnoyarsk Coal] Production Association operates the nation's largest walking excavator with the emblem of the UZTM [Urals Plant for Heavy Machine Building]. Its boom is 100 m long and the shovel capacity is 100 m^3. The giant replaces five series-produced excavators with a 15-m boom. Clearly each cubic meter of ground moved by such a giant costs much less than the use of smaller machines in the mines.

As a total during the Tenth Five-Year Plan, the famous collective of Uralmash has manufactured more than 100 types of new equipment.

Here both designers and production engineers are competing under the motto "A Personal Creative Plan for the Five-Year Plan for Each Engineer." Each of the 500 production engineers who assumed personal plans promised (this, in particular, will be achieved by introducing mechanized accessories and machine tools with program control) to help to free at least one worker from the shops. Already 240 persons have been released. The labor intensiveness of certain complex operations have been reduced by thousands of norm-hours, for example, by the production engineers A. Bunets, G. Vagin and A. Godov. The personal creative plans envisage the strengthening of cooperation between engineers and workers. Many specialists are helping to organize integrated complete-process brigades in the shops. Around 800 such brigades presently are working at Uralmash. Labor productivity in them as an average has risen by 15 percent, and in some by 25 percent.

The Urals have been and remain an important base of the nation in supplying the national economy with modern machinery and equipment. With the aid of Urals equipment, the nation mines more than 70 percent of the oil and gas, it produces 80 percent of the sinter and continuously-cast slab, 70 percent of the pig iron, all the cold-rolled strip steel, all the railway car wheels and other equipment.

In terms of their technical and economic indicators, many Urals machines are on a level of the world standards. During the 11th Five-Year Plan, the role of Urals machine building is to rise as a basis for the technical equipping of the developing industry in Siberia, the Far East, Central Asia and Kazakhstan. Here there will be an increase in the production of regional models of equipment considering its use under severe climatic conditions and in a hot climate. In the new five-year plan, the use of special designs of machines from special materials, with the creating of better operating conditions, will be an important reserve for increasing the operating time of equipment and raising labor productivity.

The competition for the rational use of metal is growing broader in the collectives of the Urals industrial enterprises. Valuable experience has been acquired at the enterprises and construction sites of Chelyabinskaya Oblast. Here there are 3,000 integrated creative brigades and due to their contribution since the start of the five-year plan it has been possible to save over 900 tons of metal. The initiative of the Chelyabinsk workers has been approved by the CPSU Central Committee. The initiative of scores of Sverdlovsk construction and installations brigades "The Five-Year Quota of the Brigade with Fewer Personnel" as well as the movement "For Economy and Savings for the Comprehensive Savings Figures and the Mass Introduction of Brigade Forms for the Organization of Labor" also were approved by the party Central Committee. In Sverdlovskaya Oblast, the initiative of the leading construction and installation workers has been supported by 6,500 production brigades. Almost 9,000 men have been released. Around 200,000 workers participate annually in the competition for rich personal savings accounts, saving an average of up to 80 million rubles a year.

A solution to the problem of increasing the efficiency of social production in the Urals will depend largely upon improving the transport ties. During the 11th Five-Year Plan, first of all there must be a substantial increase in the capacity of the broad-gauge railroads and a solution to the question of building new lines which provide access for freight from the Southern Siberian and Middle Siberian mainlines to the Southern Urals.

Intraregional motor vehicle shipments are assuming important significance. Hence the necessity of intense road construction on a modern technical level and an improvement in the transport ties between the industrial centers of the Urals as well as the remote agricultural regions and railroad junctions.

In recent years, in our nation there has been a rise in the scarcity of the balance of iron ore and copper raw materials and solid fuel. Within the Ural region, each year over 100 million tons of solid fuel are transported in and over a half billion rubles are spent on this. At the same time, the balance reserves of our own Urals ores and coal as well as those in the regions adjacent to the Urals would make it possible to meet the development of ferrous and nonferrous metallurgy and satisfy all the needs of the economy for coal fuel. The shipped-in coal must be replaced by the Turgay which is 30-40 percent cheaper than the Kuznetsk and 40-45 percent cheaper than the Karaganda. It must also be replaced by Severo-Sos'vinskiy which for Nizhniy Tagil, in particular, will be 50-60 percent cheaper than the Kuznetsk. The Reftinskaya GRES and other industrial installations should be converted to Turgay coal. The Turgay coal can be delivered to Sverdlovskaya Oblast over a large coal line. The required design and research work must be carried out during the 11th Five-Year Plan and construction started during the 12th. For developing the Severo-Sos'vinskiy Basin, a new rail line is needed from Polunochnoye Station. Even now wider use must be made of the local peat, and in the near future the supply of Tyumen' gas to the Middle Urals must be increased.

There has been technical and economic confirmation of the possibility and advisability of using a number of already explored iron ore deposits, putting into operation the lower levels of the existing deposits of the Tagilo-Kushvinskaya group and strip mining copper ores at the Gayskoye and Uchalinskoye deposits.

At the same time, it is essential to significantly intensify geological prospecting and commercial searches for more economic mineral raw materials. Calculations have shown, for example, that additional exploration and development of the Urals deposits would make it possible on an annual basis to obtain an additional 15-25 million tons of solid fuel (this problem has been taken up in the publications of the journal URAL: the article "Is the Ural Earth Being Depleted" in No 7 for 1979; under the same title there were responses and discussion in No 10 for 1979 and Nos 4, 5 and 8 for 1980.--Editors).

The primary task of the Middle Urals is to increase ore output at the first Kachkanar GOK [Mining and Concentration Combine] and begin building the second GOK. Subsequently: to develop other major titanomagnetite deposits (Kytlimskoye, Vasimskoye and others) and accelerate the development of technologies which would make it possible to use the polymetallic iron, chromium and nickle ores in the region of Serov (reserves of around 1.5 billion tons).

The integrated use of natural raw materials generally speaking is one of the most urgent tasks for the entire Urals economic region. The problem is that the Ural ores are marked by a complex character and possess multiple components. They contain around 40 valuable elements. But, as a rule, the nonferrous metallurgy enterprises extract only 18 or 19 while ferrous metallurgy removes only 1 or 2 components. At the same time, the industrial dumps are growing occupying enormous areas of land. This has a negative impact on the environment. But the main thing is that there are significant losses of valuable products. It is essential to have the integrated use of the wastes from overburden and enclosing rock (for more detail on this see the article "How Much Rock in the Urals?" in the journal URAL, No 12, for 1980.--Editors). There is an urgent need for a program for the integrated use of mineral raw materials, side products and industrial wastes in the Urals during the 11th Five-Year Plan and in the longer run.

Beneath Orenburgskaya Oblast they have discovered 70 types of minerals, of which 60 are of industrial significance and they are characterized by a content of numerous valuable components. The ore-mining and metallurgical enterprises in the oblast have built up large stocks of secondary raw materials which represent not only a valuable building material but also a source of obtaining nonferrous and rare metals over the future.

There is also the unsolved problem of extracting all the components from the Orenburg gas. They include: methane, ethane, butane, propane, pentane, hexane, helium, carbon dioxide, nitrogen, sulfur and mercaptans. These are a source of high-caloric fuel and an enormous treasurehouse of resources for valuable chemical raw materials. However, at present only the dry fuel gas and certain component elements such as sulfur, stable condensate (and only because the transporting of gas would be impossible without their removal) as well as the broad fraction of light hydrocarbons and helium are extracted. This is explained by the fact that the developer of the deposit, the USSR Ministry of Gas Industry, needs only the fuel. The narrow departmental approach to the use of the unique deposit has led to great economic losses on a national scale. Over the 4 years of operating the deposit, we have failed to obtain various components valued at more than 1.6 billion rubles. Calculations show that in the future the annual unrecoverable losses will be at least 400 million rubles. Moreover the one-sided approach to extracting the side components has led the Orenburg TPK to be a typical sectorial enterprise with a limited production range.

The example of the Perm' oil producing sector also shows to what a narrow departmental, consumer attitude toward the resources leads. Over a certain period it has begun to lag behind as a result of the unjustified methods of forcing oil production. A scientific, comprehensive method is the only dependable way!

The same must be said about the integrated use of forest resources. At the forest industry enterprises in the Urals oblasts, with the common problem of the overcutting of the stands, production wastes are high although the effectiveness of their use has been proven. A large amount of lumber is shipped out of the Urals region in an unprocessed form. And the most paradoxical thing is that the countershipments have not declined. For example, Tavda Station handles as much lumber in cars moving to the southwest as there are coming from all other directions for the enterprises of the city.

The correct organization of the work of the lumbermen, the full utilization of the deciduous and small-sized wood, the accelerated development of the chemical and chemical-mechanical processing of wood, including the wastes and poor-grade raw materials, and the elimination of the discrepancy between the felling and replanting of the forests--these are the tasks for the immediate future.

Practice and science have shown that one of the basic areas for raising the integrated use of natural raw materials i our nation is the creation of TPK and industrial centers.

This rend is also characteristic for the Urals. And the main path for our region is the reconstruction of the existing industrial centers with the creation in them of enterprises for the complete processing of raw materials and a unified production infrastructure.

Regardless of the generally favorable water balance in the Urals, a number of the industrially most developed central rayons of Sverdlovskaya, Chelyabinskaya and Orenburgskaya Oblasts are experiencing an acute need for water resources. For this reason the necessity has arisen of rapidly building large reservoirs such as the Nizhne-Sysertskoye, Bol'she-Ashkinskoye, Dolgobordskoye, Yangel'skoye and Kuvandykskoye as well as the sharply increased use of recoverable and reusable water supply systems, waste-free production processes and the carrying out of integrated measures to protect and improve the environment.

Seemingly all of these are indisputable truths which are reinforced by practice and long-run calculations. However, the incomprehensible sometimes happens. For example, when it is a question of locating Union-level enterprises in Orenburgskaya Oblast, the entire question was held up by the absence of water sources. Hence they must be sought out and created! But the USSR Gosplan assumed an incomprehensible position on this question. Its expert commission recognized the proposal to build the Kuvandykskoye Reservoir as unrealistic while construction was considered ill-advised due...to the absence of a water consumer (?!).

The agriculture of the region is confronted with very serious problems. In order to more fully satisfy the needs of the population for food products, there must be comprehensive development, intensification of agricultural production, a rise in the level of cooperation and integration and a strengthening of feed supplies for livestock raising. During the 11th Five-Year Plan a powerful reserve of food products should also be put into operation in the form of organizing subsidiary farms by the large enterprises and institutions.

For the Urals the 11th Five-Year Plan is years of rapidly introducing scientific and technical achievements into the national economy and the strengthening of long-term ties between science and production. Even now the institutes and laboratories of the Urals Scientific Center have practical contact with more than 500 regional enterprises and associations.

During the years of socialist construction, the Urals region has been covered by a broad network of scientific research and design institutes and they have made a rather weighty contribution to solving difficult national economic problems. Suffice it to say, the Chelyabinsk Scientific Research Metallurgical Industry alone has carried out 109 projects on a level of inventions and has received 165 certificates of invention. The national economy uses 92 inventions of the institute. The total economic effect from this is over 10 million rubles. The institute is the holder of patents in a number of nations and upon the request of foreign firms has sent out several technical proposals for the sale of licenses.

Many scientific developments in Chelyabinskaya Oblast come down to the problem of saving metal. Under the conditions here precisely this problem has become a fundamental one and the searches in this area are bringing particularly great results when they are carried out in close cooperation with the enterprise collectives. An example is the use of powder metallurgy. The following data have been obtained at the Production Association of the Chelyabinsk Tractor Plant imeni V. I. Lenin. The conversion to manufacturing 40 parts by this method would make it possible to release 170 men, 70 metalworking machines and save 1,300 tons of metal. The overall economic effect would be 700,000 rubles a year.

Scientists from the Urals Scientific Center have worked out development forecasts for the productive forces of the Ural Region not only for the 11th Five-Year Plan but for 10-20 years to come. These forecasts were approved by the appropriate planning bodies. At present, the planners, together with scores of sectorial institutes, are beginning to work out a number of long-range specific programs which on an integrated basis will solve the problems of developing water management, the coal-metallurgical base, the ore mining industry, machine building, the production infrastructure, particularly road construction and the agroindustrial complex, programs for sociocultural development and a number of others which will help eliminate the shortcomings and solve particularly urgent, important problems.

All these measures will contribute to the even more efficient work of the entire Urals national economic complex.

COPYRIGHT: "Ural", 1981

10272
CSO: 1820/142

POTENTIAL OF EASTERN REGIONS STUDIED

Moscow EKONOMICHESKAYA GAZETA in Russian No 6, Feb 81 p 10

/Article by M. Mazanova, head of the division of the Council for the Study of Productive Forces under the USSR State Planning Committee, doctor of economic sciences: "Territorial Proportions of the Economy"/

/Text/ An improvement in the territorial proportionality of the national economy assumes ever greater importance in ensuring high and stable rates of growth of public production and a steady increase in its efficiency.

The specific natural and economic conditions of regions and the possibilities for their development should be carefully taken into account during the elaboration of long-term plans. Society is not indifferent to the expenditures that it incurs when drawing mineral, forest, land and water resources into production in one region or another and expending people's labor on the production of the necessary products.

Essence and Formation of Proportions

A territorial distribution of aggregate social labor ensuring high national economic efficiency forms the economic essence of the territorial proportionality of public production. In the final analysis, the share ratios of aggregate labor (proportions) arising during this distribution are expressed in the ratio of regions in the production of material wealth and services measured by physical and value indicators. For the optimization of territorial proportions of the national economy it is necessary to examine the entire system of regions simultaneously.

The most efficient territorial proportions can be formed when a harmonious development of the national economy of the country as a whole is attained.

Territorial proportions are the result of the specialization of regions in the social division of labor and of the national economic complexes formed on this basis, of the rational utilization and interregional distribution of labor and material resources and of the social structure of the population of every region.

The draft of the CPSU Central Committee for the 26th Party Congress stresses that an improvement in the distribution of productive forces for the purpose of increasing the efficiency of public production should be made on the basis of further specialization and proportional development of the economy of the Union republics and economic regions in the country's single national economic complex.

The planned formation of territorial proportions of the national economy improves considerably in connection with the implementation of measures for an improvement in the economic mechanism. An overall program for scientific and technical progress is the initial stage.

Scientific forecasts of the possible increase in labor, mineral-raw material, fuel-power and water resources and of the transformation of land and forest resources throughout regions are made. Then, on the basis of the main economic task of social development, during the planned period the variants of the all-Union volumes and sectorial structure of production are determined and a balanced coordination of production and consumption throughout the country is attained.

On the basis of an analysis of the formed territorial proportions, of the sectorial structure of production in regions and of their provision with natural and labor resources and with created productive and unproductive fixed capital the possibilities of changing them are revealed. With due regard for this a scientific concept of the long-term territorial structure of the national economy, primarily material production as the basis for the regional economic policy of the future, is developed. Such a concept makes it possible to develop the basic trends in the long-term distribution of the country's productive forces and in the economic and social development of the Union republics and regions and to select the most efficient variant. In the Council for the Study of Productive Forces Under the USSR State Planning Committee investigations in this direction are conducted in connection with the development of the long-term plan for the distribution of the productive forces of the USSR for the period until 1990 and for a more distant future.

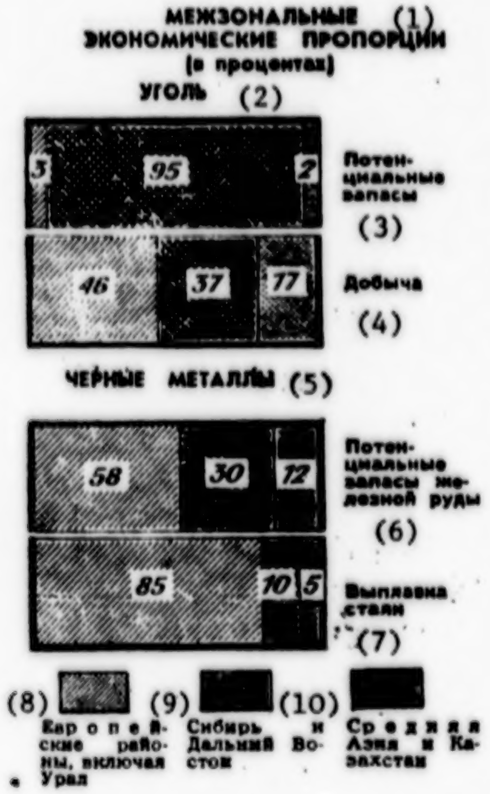
Potential of Eastern Regions

The bulk of the productive fixed capital, of the production of industrial and agricultural products and of the country's population is concentrated in the European part of the USSR, including the Urals. Large thermal and atomic electric power stations are located there, the resources of the Kursk Magnetic Anomaly and of the Timano-Pechora Territorial Production Complex are developed and the Kama complex of plants and other enterprises are built. During the five-year plan industrial production increased by more than 27 percent.

However, the basic reserves of power and raw material resources are located in the country's east, which is an important factor in the formation of long-term territorial proportions.

For example, as can be seen from the diagram, an overwhelming portion of the coal reserves is located in the country's east, but its major portion is extracted in the European part and in the Urals (according to 1979 data). Therefore, an accelerated economic development of the country's eastern regions is so urgent.

It is necessary to overcome objective, sometimes contradictory, tendencies, which also predetermine not only the present, but especially the long-term, distribution of public production and its economic efficiency. First of all, it is necessary to note the gravitation of new construction toward "old," well developed regions. Of course, this reflects the policy of production intensification and the large-scale reconstruction and retooling of enterprises. However, many ministries and departments are also engaged in large-scale new construction there, at times disregarding the insufficient provision of European regions with raw materials and, especially, fuel and power resources.



Key:

1. Interzonal economic proportions (in percent)
2. Coal
3. Potential reserves
4. Extraction
5. Ferrous metal
6. Potential reserves of iron ore
7. Steel output
8. European regions, including the Urals
9. Siberia and the Far East
10. Central Asia and Kazakhstan

The draft of Basic Trends determines that further development in this zone should be carried out as a result of a better utilization of the created production potential and the placement of new and expansion of existing power- and water-intensive industries. Plans have been made to develop atomic power engineering and to continue the development of water power resources in the North Caucasus and the Transcaucasus.

The vast resource potential of eastern regions forms the basic reserve for improving the territorial structure of the national economy. Accelerated rates of economic utilization of these rich resources and extensive development of new regions represent the general trend in the present and long-term distribution of productive forces determined by the decisions of party congresses and plenums of the CPSU Central Committee. During the 10th Five-Year Plan the establishment of powerful new fuel and power bases in Kansko-Achinsk and Ekibastuz coal basins continued and nonferrous metallurgy, chemical, cement and woodworking industry and machine building enterprises were built. As a result, the industry in regions east of the Urals increased output almost by one-third. Almost the entire increase in the output of gas, petroleum, coal and timber, 44 percent of the increase in the production of pulp, 60 percent of the increase in the production of cardboard and about 70 percent of the increase in cement was obtained there. On the average, the rates of growth of industrial production in Siberia and the Far East greatly exceed the average Union rates.

The intensification of economic activity in eastern regions is most noticeable in the fuel industry. The increase in the country's power potential is due mainly to them. This fact is of fundamental importance. In the future power resources, or more accurately, the efficiency of interzonal distribution of power consumption, will have a decisive effect on the formation of rational territorial production proportions.

The draft of Basic Trends envisages the performance of major work on the development of natural resources in eastern regions and of fuel-power and raw material bases. Plans have been made to concentrate the construction of power intensive industries there. Therefore, the development of highly power-intensive nonferrous metallurgy industries and of the pulp and paper industry and the commissioning of capacities for chemical fibers and synthetic rubber will continue there. At the same time, in the European part of the country it is necessary to pursue a strict policy of limiting the growth of power consumption in order to reduce the transfer of fuel and electric power from the east to the west of the country to optimum volumes.

The party line for equalization of the level of the republic's economic development and for an accelerated development of natural resources in eastern regions is reflected in the state plan for the economic and social development of the USSR for 1981. West Siberia accounts for more than one-half of the total planned volume of petroleum extraction. It will also ensure the entire increase in gas extraction and will give 42 percent of the total volume of its extraction. The production of electric power, plastics, chemical fibers, caustic soda, pulp, products of the electrical engineering industry and cement increases considerably in East Siberia. The economic complex of the Far East and the national economy of the Kazakh SSR will be developed further.

In the Central Asian republics in the last decade the development of the national economy insufficiently took into consideration the increasing labor potential and, primarily, the specific nature of formation of labor resources. The draft of Basic Trends envisages an expansion of the training of personnel from the local population. The creation of social and economic prerequisites for the territorial redistribution of labor resources in the interest of the development of the country's other regions becomes important.

For the purpose of more fully utilizing labor and natural resources, in our opinion, the directive of the draft of Basic Trends concerning the development of animal husbandry and other labor intensive sectors of agriculture, light industry and machine building in this zone should be supplemented with a statute on higher rates of growth of industrial production.

A successful solution of the arising problems requires a further improvement in the planning of territorial proportions.

In our opinion, at a statewide level territorial planning should be, first of all, the planning of global territorial proportions according to economic zones as an independent part of the economic proportions of reproduction and as one of the major sources of increase in the efficiency of public production. The most rational distribution of aggregate social labor, production volumes and capital investments among economic zones should serve as the initial base for the determination of the rates and levels of development of the national economy of the Union and autonomous republics, economic regions, territorial production complexes, krays and oblasts in the country.

11,439
CSO: 1820/144

END

END OF
FICHE
DATE FILMED

29 May 1981